War
1159
14. 3

WIDENER
HN L7SK U

FIELD SERVICE REGULATIONS
UNITED STATES ARMY

1914

With War Department Changes

U.S.
WAR DEPARTMENT : OFFICE OF THE CHIEF OF STAFF

Field Service Regulations

UNITED STATES ARMY

1914

Text Corrections to February 4, 1916
Changes No. 4

NEW YORK
ARMY AND NAVY JOURNAL
1914

War 1159.14.3

~~Sec. 5~~

Mar. 3, 1917
HARVARD UNIVERSITY
Historical Department

TRANSFERRED TO
HARVARD COLLEGE LIBRARY
June 19, 1939.

Am H

19903

War Department,
Document No. 475.
Office of the Chief of Staff.

WAR DEPARTMENT,
OFFICE OF THE CHIEF OF STAFF,
Washington, March 19, 1914.

The following Field Service Regulations, revised by the General Staff of the Army, are approved and published for the information and government of the Regular Army and the Organized Militia, and in time of war, the Volunteer forces.

Success in war can be achieved only by all branches and arms of the service mutually helping and supporting one another in the common effort to attain the desired end.

The basic principles of the combat tactics of the different arms are set forth in the drill regulations of those arms for units as high as brigades. It is the function of higher troop leading to so combine and coordinate the combat tactics of all the arms as to develop in the combined forces the teamwork essential to success.

While the fundamental principles of war are neither very numerous nor complex, their application may be difficult and must not be limited by set rules. Departure from prescribed methods is at times necessary. A thorough knowledge of the principles of war and their application enables the leader to decide when such departure should be made and to determine what methods should bring success.

Officers and men of all ranks and grades are given a certain independence in the execution of the tasks to which they are assigned and are expected to show initiative in meeting the different situations as they arise. Every individual, from the highest commander to the lowest private, must always remember that inaction and neglect of opportunities will warrant more severe censure than an error in the choice of the means.

By order of the Secretary of War:

LEONARD WOOD,
Major General, Chief of Staff.

CONTENTS.

PART I.

ORGANIZATION.

Page.
Article I. Land forces of the United States.................. 9
Coast defense.................................. 10
Overseas departments.......................... 11
Tables of organization.......................... 11

PART II.

OPERATIONS.

Article I. Information:

General principles.................................. 12
Reconnaissance.................................. 13
Messages, reports, field maps, and war diaries.......... 20
Transmission of information.......................... 22

Article II. Security:

General principles.................................. 24
Advance guard.................................. 26
Advance guard of a small command.................. 29
Advance guard of a division (independent)........... 30
Security for the head of a retreating force.............. 30
Flank guards.................................. 31
Rear guards.................................. 31
Rear guard of an advancing force.................. 32
Outposts and outguards.............................. 33

Article III. Orders:

General principles.................................. 40
Composition of formal field orders.................. 42
Form of field orders.................................. 44

Article IV. Marches and convoys: Page.
General principles.......... 47
Conduct of marches.......... 47
Special regulations—
Marches in peace.......... 55
Marches in campaign.......... 56
Convoys.......... 59
Conducting prisoners.......... 63
Convoys by water.......... 63
Article V. Combat:
Combat principles.......... 67
Use of combined arms.......... 68
Fire superiority.......... 70
Frontage of units in combat.......... 71
Intrenchments.......... 72
Use of machine guns.......... 72
Post of the leader.......... 72
Reserves.......... 73
Plan of action.......... 75
Combat orders.......... 75
Development and deployment for action.......... 78
The surprise.......... 80
The rencontre.......... 80
Offensive combat—
The attack.......... 82
The enveloping attack.......... 83
Turning movements.......... 84
The holding attack.......... 84
The assault.......... 85
The pursuit.......... 87
Defensive combat—
The passive defense.......... 89
The defense seeking a favorable decision.......... 89
The counter-attack.......... 90
Cavalry in defensive combat.......... 91
Defensive positions.......... 91
Positions in readiness.......... 93
Withdrawal from action.......... 94
Covering positions.......... 95
Assembly positions.......... 95
The retreat.......... 96
Delaying actions.......... 98

Article V. Combat—Continued.

Night combat—

Page.
The offensive.... 100
The defensive.... 100
Night advance.... 101
Bivouac on the battlefield.... 101
Measures to be taken after the battle.... 102

Article VI. Shelter:

General principles.... 103
Shelter in the zone of the interior.... 104
Shelter in the theater of operations.... 105
Shelter during battle.... 108
Shelter during sieges.... 108
Care of troops.... 108

PART III.

ADMINISTRATION.

Article I. General.... 111

Article II. The service of the interior:

General.... 112
Mobilization and concentration.... 113

Article III. The service of the theater of operations:

General.... 117
Headquarters and staff.... 117

Article IV. The zone of the advance:

General.... 120
Transportation.... 121
Supply service.... 124
Ammunition service.... 132
Sanitary service.... 137
Engineer train.... 143

Article V. The zone of the line of communications:

General.... 145
Service of defense.... 146
Supply, sanitary, and telegraph service.... 148
Service of military railways.... 151
Channels of correspondence.... 154

Article VI. Transportation by rail:

Travel on commercial railways.... 156
Travel on military railways.... 160

Page.
Article VII. Military police 163
Article VIII. Censorship 165
  Correspondents 166
Article IX. Field post office 170

APPENDICES.

USEFUL INFORMATION.

1 A. War strength in round numbers, road spaces, and dimensions of camps 172
1 B. Semi-permanent camps 174
2. Types of field intrenchments 180
3. Forms of field orders 182
4. Field maps and sketches 188
5. Distinguishing flags and lanterns 189
6. Extracts from international conventions and conferences 190
7. Miscellaneous data 205
8. Signals and codes 209
9. List of abbreviations 214

FIELD SERVICE REGULATIONS, U. S. ARMY.

Part I.

ORGANIZATION.

Article I.

LAND FORCES OF THE UNITED STATES.

1. The land forces of the United States consist of the regular army, the organized land militia when called into the service of the United States, and such volunteer forces as Congress may authorize.

In peace the Army of the United States consists, ordinarily, of the regular army; but whenever the United States is invaded or in danger of invasion from any foreign nation, or of rebellion against the authority of the Government of the United States, or the President is unable with the regular forces at his command to execute the laws of the Union, he may call into the military service of the United States all or any part of the militia organized as a land force.

In war, or when war is imminent, the Army of the United States, after the whole or part of the organized land militia has been called into service, may be further augmented by the employment of volunteers. When the raising of a volunteer force has been authorized by Congress, and after the organized land militia of any arm or class has been called into the military service of the United States, volunteers of that particular arm or class may be raised and accepted into said service regardless of the extent to which other arms or classes of militia may have been called into service.

2. The land forces are grouped under two general heads, i. e.:

1. **The Mobile Army.**
2. **The Coast Artillery.**

3. The Mobile Army.—The mobile army is primarily organized for offensive operations against an enemy, and on this account requires the maximum degree of mobility.

The basis of organization for the mobile army is the division. A division is a self-contained unit made up of all necessary arms and services, and complete in itself with every requirement for independent action incident to its ordinary operations.

When several divisions are acting together they may be grouped into field armies. To the field army there are attached certain organizations of an auxiliary character, called field army troops.

When the number of field army troops attached to a field army make it necessary, they are organized into a separate brigade for purposes of supply and administration and a commander is designated and the necessary staff is assigned to him. Infantry, cavalry, or military police may be attached to this separate brigade for defensive purposes on the march. The number of troops so assigned depends on the condition of the service and the number of field army troops in the brigade. Troops for the protection of field army troops are preferably furnished from troops assigned to the line of communications.

If the conditions of the particular service require it, divisions operating independently may be furnished with the necessary field army troops. A brigade operating independently, when so designated by competent authority, is known as a separate brigade, and when so operating may be supplied with the necessary special and field army troops.

When several field armies are operating in the same theater of war and if conditions so require it, they may be organized into armies.

4. A line of communications is established for each important force about to engage in field operations of an extensive character and supplied from a separate base.

5. **The Coast Artillery.** — The coast artillery is charged with the care and use of the fixed and movable elements of land and coast fortifications, including submarine mine and torpedo defense.

COAST DEFENSE.[1]

6. The military preparations for the defense of a coast line include:

(1) The construction of permanent fortifications and the provision of submarine defenses for defense against naval attack. Such defenses are manned and operated by coast artillery troops.

---

[1] See paragraph 252, subparagraph 5.

(2) The construction of semipermanent fortifications and field works for the protection of the permanent fortifications against capture by small raiding parties landing from ships, or, in the case of an island, in boats from the adjacent shore. Troops assigned to this duty are known as coast artillery supports. They may be troops of the coast artillery or troops of the mobile army.

(3) Divisions and field armies concentrated and held at strategic centers of value with reference to the coast line.

OVERSEA DEPARTMENTS.

7. The commander of an oversea department is charged with its defense, and directs the operations of both the troops of the Mobile Army and those of the Coast Artillery serving therein. (See also paragraph 258.)

TABLES OF ORGANIZATION.

8. The details of organization, the amounts and kinds of transportation, and the factors on which the allowance of transportation is based, are fixed in the Tables of Organization, United States Army.

Part II.

OPERATIONS.

Article I.

INFORMATION.

GENERAL PRINCIPLES.

9. Military Information.—Military information may be considered under two general heads, namely, (1) that collected by the General Staff in time of peace; (2) that obtained by troops in the field after the outbreak of hostilities. The former relates to the geography, resources, and military strength of the various nations, and enables the War Department to decide upon the size of an army or expedition, the proportion of the different arms, character of clothing, equipment, etc., that may be necessary in the event of war. The latter relates to the theater of operations and to the position, strength, intentions, etc., of the enemy in the field, and is absolutely essential to enable a commander properly to estimate the situation.

Information in the field is obtained from various sources—higher commanders, adjoining troops, inhabitants, newspapers, letters, telegraph files, prisoners, deserters, spies, maps, and reconnaissances. Knowledge of the terrain, always essential to a correct understanding of the situation, is obtained from a careful study of available maps, supplemented by thorough reconnaissance.

All information of the enemy and of the theater of operations is sent to the intelligence section of the general staff group of headquarters of units larger than a brigade (par. 261). This section weighs and classifies the information brought in and supervises the preparation of the necessary field maps.

An efficient secret service is organized as soon as practicable.

10. In hostile territory influential persons, especially those supposed to be active in the enemy's cause, may be seized and their persons and houses searched. Letters and newspapers in post offices and files in telegraph offices are carefully examined and anything of importance sent to higher authority. Matter not of importance is replaced, if time permits; if not, the whole is sent to headquarters. Local maps of recent date may be of great value.

When reliable information of the enemy can not be obtained, it is assumed that he will act with good judgment.

Information received by any person in the military service, and the action taken thereon, must be promptly reported to the proper military superior.

Unless instructions have been given to spread false information, all persons connected with the military service are forbidden to discuss the military situation, plans, movements, etc., with, or in the presence of, civilians of any age, sex, or nationality.

RECONNAISSANCE.

11. Reconnaissance is the military term used to designate the work of troops or individuals when gathering information in the field. Reconnaissance begins as soon as the theater of possible operations is entered and continues throughout the campaign. No matter what other sources of information of the enemy may be available, reconnaissance must be depended upon to obtain the information upon which all tactical movements of troops should be based.

12. By Aero Squadron.—In forces of the strength of a division, or larger, the aero squadron will operate in advance of the independent cavalry in order to locate the enemy and to keep track of his movements. Contact with the enemy once gained will be maintained thereafter continuously.

13. By the Cavalry.—Reconnaissance in the theater of operations is best made by the cavalry, which from the beginning of the campaign seeks to determine the enemy's strength and dispositions. It protects its own army against surprise, screens its movements, and insures the safety and success of the troops of other arms. The defeat of the hostile cavalry and its expulsion from the field are usually the best means to this end. As the opposing armies draw near each other, the cavalry endeavors to secure control of the ground between and bends every effort to that close and continuous reconnaissance of the enemy's forces that is vital to the success of the entire campaign.

As a rule, only general instructions are given to a leader of independent cavalry. It is usually sufficient to indicate the country to be reconnoitered, invite attention to specially important localities, and point out the extent of the daily advance of the field force.

He is generally in telegraphic communication with the supreme commander, and keeps him constantly informed of the situation at the front. In the absence of telegraphic facilities, he reports according to the circumstances, sending his messages by the divisional cavalry when practicable.

14. By Independent Cavalry.—Reconnaissance by the independent cavalry will give, in a general way, the enemy's location for several hours, or even days, preceding contact of the main bodies. If this cavalry is strong enough to defeat the enemy's cavalry, it will be enabled to locate the hostile infantry and artillery and to determine their approximate strength. If weaker than the enemy's cavalry, it must rely upon the work of strategical and tactical patrols to obtain detailed information of the enemy, or it must be assisted by the other arms. In the latter case the advance guard of the main body will afford this assistance by stopping the advance of the enemy's cavalry and compelling him to deploy his infantry and artillery, in part at least.

On very wide fronts an army is generally covered by two or more bodies of independent cavalry; each is informed of the extent of ground it is to cover and keeps in touch with the neighboring cavalry.

15. By Divisional Cavalry.—The cavalry attached to an infantry division is called divisional cavalry. When the division is operating independently, the divisional cavalry acts also as independent cavalry; when the division forms part of a field army, the divisional cavalry is known as advance cavalry. It usually enters into the composition of advance, flank, rear, and outpost guards, and when so employed is known as advance guard, flank guard, rear guard, and outpost cavalry, as the case may be, and performs such reconnaissance as the situation demands.

Reconnaissance by the advance cavalry is such as will afford security to the main body. It prevents surprise to any part of the force. If stronger than the cavalry opposing it, the advance cavalry will obtain valuable information of the enemy before the infantry and artillery of the advance guard become engaged. But where the cavalry, for any reason, fails in this purpose, the work must be done by the other arms, without, however, so dispersing battle units that they will be outside of supporting distance of each other.

Though its reconnaissance is more restricted than that of the independent cavalry, advance cavalry goes more into detail and gathers information as to the resources of the country, roads, camping places, etc. As combat becomes imminent and the independent cavalry is drawn off to a flank, the advance cavalry must be especially active to guard against surprise, gain information of the enemy's movements, and prevent incursions of his patrols.

When there is independent cavalry in front, the divisional cavalry maintains connection therewith; when not, it reconnoiters far to the front and gains touch with the enemy if possible, operating in a manner similar to that of independent cavalry of larger units.

16. By Infantry.—The extent of the infantry reconnaissance will not be so great where the aero squadron and the cavalry are able to perform this service efficiently, as it must be in the absence of efficient reconnaissance by the other arms. In no case, however, can infantry reconnaissance, preceding or during combat, be dispensed with. Infantry and artillery can not rely wholly upon cavalry or aero reconnaissance, but must conduct such close-in reconnaissance as is necessary for security and to determine their immediate dispositions.

In the absence of cavalry, reconnaissance at a distance is made by infantry or scouts specially detailed for that purpose.

If a command is weak in cavalry, or the country is rough and broken, it may be advisable to use reconnoitering detachments composed of both infantry and cavalry.

17. Reconnaissance Immediately Preceding Combat.—Reconnaissance preceding deployment for action is of vital importance. On the information of the enemy and of the terrain obtained through proper reconnaissance combat orders are based. How complete such reconnaissance may be will depend upon the time that can be spared for the purpose without losing the initiative in action, upon the character of information desired, and upon the efficiency of the measures taken by the enemy to conceal his dispositions.

18. The strength of the force employed in this reconnaissance is determined by the character of the information desired and by the nature of the hostile screen. In every instance it must be strong enough to penetrate the enemy's screen, and where detailed information of the enemy's position is desired, to cause the deployment of the enemy's infantry and the opening of fire by part, at least, of his artillery. In the latter case the combat reconnaissance may develop into the opening phase of the attack, and care must be taken that enough troops are kept in hand to change completely the course of the attack, if the information obtained calls for such action.

19. In any advance toward the enemy the advance guard must be relied upon for such reconnaissance as is necessary, either to supplement the reconnaissance of other troops or to replace it when other reconnaissance is wholly wanting. It is important that the advance guard force the enemy to disclose his position and strength as early as possible. A strong force of artillery is most useful for this purpose, as it clears up the situation in a way that can not be done by other troops, except by incurring heavy losses.

In encountering the enemy in a position that is to be developed the advance guard must continue, by means of the advance cavalry, the reconnaissance begun by the independent cavalry or by other troops. The enemy will not disclose his position, particularly that of his artillery, until forced to do so by a determined reconnaissance which may call for the use of infantry and artillery in force before it can accomplish its purpose. The advance of the infantry will finally force back all advanced detachments of the enemy and bare his main position. The artillery will assist in this advance by opening fire on any targets of importance that the infantry advance uncovers. Finally, the enemy's artillery will be obliged to disclose its position by opening fire, either to stop the advance of the opposing infantry or to keep down the opposing artillery fire. The information thus gained of the enemy's position and strength will enable the leader to form his plan of attack.

In the rencontre efficient measures for security on the march must be relied upon to take the place of the more complete reconnaissance which the necessity of obtaining the initiative in deployment forbids. In an attack on a position that the enemy has had time to take up deliberately and to strengthen, time is not so important an element, and the reconnaissance preceding deployment must be as complete as may be necessary to determine the enemy's strength and dispositions.

20. Reconnaissance During Combat.—The infantry will keep up during combat such reconnaissance as will enable it to keep contact with the enemy, acquaint itself with the terrain in its front, and especially to protect its flanks and rear. The field artillery continues the reconnaissance called for by its tactical employment.

21. During combat the aero squadron will operate around the flanks and over and to the rear of the enemy's position, for the purpose of reporting his dispositions, the approach of reinforcements, or the beginning of his withdrawal from action.

22. During combat the cavalry will conduct an extended reconnaissance around the flanks and to the rear of the enemy's position, but such reconnaissance must be conducted by small detachments in order that the main body of the cavalry may be kept close at hand to aid in obtaining success in the main battle.

23. Reconnoitering Patrols.[1]—The chief duty of reconnoitering patrols is to gather information. They habitually seek safety in concealment or flight, fighting only when their mission demands it. The most skillful patrolling is where patrols accomplish their mission and return without being discovered by the enemy.

24. The commander determines the number and strength of patrols and when they are to be sent out. It is a cardinal principle to send out only such patrols as insure effective reconnaissance. Patrols vary in strength from two or three men to a company. Small patrols have great mobility, are easily concealed, and do not draw heavily on the fighting strength. In hostile territory, or when resistance is expected, stronger detachments are required. These cover themselves with small patrols of two to four men, the remainder acting as support.

The officer sending out a patrol verifies the detail, designates a second in command and gives the necessary instructions. Horses of conspicuous color and those that neigh when alone should not be sent. Precautions are taken to avoid the glitter and rattle of weapons and equipments.

The orders or instructions for a patrol, or for any detachment going on reconnaissance, must state clearly where the enemy is or is supposed to be, what information is desired, what features are of special importance, the general direction to be followed, whether friendly patrols are likely to be encountered, and where messages are to be sent or the patrol is to report. Important and comprehensive instructions should be in writing, but precautions against capture of papers must be taken. An officer sending out a patrol must be certain that his orders are understood. Detailed instructions are, as a rule, avoided. When necessary the time of return is stated.

25. Patrol Leaders.—Skillful patrolling is the basis of efficient reconnaissance. Patrol leaders are selected with care, officers being detailed for important missions. Patrol leaders should combine the qualities of good health, vigorous physique, keen eyesight, presence of mind and courage, with good judgment, military training, and experience. They should be able to read maps, make sketches, and send clear and concise messages. Officers on such duty often find themselves in positions where the situation must be viewed from the standpoint of a higher commander, and should be able to reason accordingly.

---

[1] The term patrols is used to designate small detachments employed for a variety of purposes, the name of the detachment indicating its duty, as visiting, connecting, combat, exploring, reconnoitering, flanking, harassing, pursuing patrols, etc.

26. Conduct.—Patrols exercise the greatest vigilance to prevent discovery.

No normal formation for a patrol is, or should be prescribed. Under the leader's guidance it moves so as to guard against surprise, usually with point and flankers. To extend the sphere of its observation, still smaller patrols (one or two men) may be sent out for short distances, communication with the leader being maintained by signals. Whatever the formation adopted, it should favor the escape of at least one man in case of surprise.

In questioning civilians caution is observed not to disclose information that may be of value to the enemy. Strangers are not allowed to precede the patrol. Patrol leaders are authorized to seize telegrams and mail matter, and to arrest individuals, reporting the facts as soon as possible.

27. Indications of the Enemy.—Nothing should escape the observation of the patrol. The slightest indication of the enemy should be reported to the leader at once. On roads and in abandoned camps, signs are often found which indicate the number, character, and condition of the enemy, and the direction in which he is marching. Abandoned clothing or equipage may bear marks indicating organizations.

A thick and low cloud of dust indicates infantry; a high and thin cloud, cavalry; a broken cloud, artillery or wagon trains. The size of the command and direction of march may be roughly estimated by the dust, but the effect of wind must be considered.

The strength of a body of troops may be estimated from the length of time it takes to pass a given point. Assuming that infantry in column of squads occupies half a yard per man, cavalry in column of fours 1 yard per trooper, and artillery in single column 20 yards per gun or caisson, a given point would be passed in one minute by about—

175 infantry.
110 cavalry, at walk.
200 cavalry, at trot.
5 guns or caissons.

For troops in column of twos, take one-half of the above estimates.

28. When it is certain that the enemy has been discovered, that fact is promptly reported.

The exact location of the enemy—whether deployed, marching, or in camp—his strength, and the arms of service are next ascertained and reported. It is often difficult to decide whether the troops discovered are the main body or merely the advance guard or outposts. The rule is to observe the main body; therefore it may be necessary to obtain a view from a position in rear of the covering troops. This is done by going around or by breaking through, returning over different ground to avoid ambuscade.

29. Signals.—In addition to the usual signals prescribed in drill regulations, the following should be clearly understood by members of a patrol:

Enemy in sight in small numbers, hold the rifle above the head horizontally; enemy in force, same as preceding, raising and lowering the rifle several times; take cover, a downward motion of the hand

Other signals may be agreed upon before starting, but they must be familiar to the men; complicated signals are avoided.

30. Employment of Air Craft.—Military air craft of all kinds will be employed under the direction of the commander of the forces to which they are assigned and the immediate control of the officer commanding the aero organization.

Balloons are classed as free, captive, and dirigible. Free balloons may be used to convey information from besieged places, the return message being sent by radiotelegraphy, carrier pigeons, or otherwise. Free balloons are of little use for any other service, and are not very dependable on account of their uncertainty of movement. Captive balloons may be used for tactical reconnaissance, for observation of artillery fire, and for signaling. Communication from a captive balloon to the ground should be by telephone.

Large dirigible balloons are of practical value for strategical reconnaissance and to travel great distances; they are also suitable for carrying a number of observers, radio equipment, machine guns, and considerable weight of explosives. Aeroplanes are more dependable for field service with a mobile army than dirigible balloons, as the latter require substantial shelter from winds while on the ground.

31. Reconnaissance by aeroplane includes strategical and tactical reconnaissance and the observation of artillery fire. Aeroplanes are also used to prevent hostile aerial reconnaissance.

Strategical reconnaissance by aeroplane is effective within a radius of 150 miles from the starting point, and is for the purpose of determining the position, strength, and direction of advance of the large elements of an enemy's forces, and also the character of the roads, railroads, streams, and the general military topography of the theater of operations.

Tactical reconnaissance by aeroplane is used both in attack and defense. It is extended in its nature and does not involve minute examinations of very small localities or detachments. It is designed to discover turning and enveloping movements, the position and strength of the enemy's general reserve, artillery positions and movements of cavalry; also, from the movement of combat or field trains behind an enemy's position information may be gained as to whether certain parts of the line are being weakened or strengthened, or whether a retreat is contemplated.

For observation of fire of field artillery, aeroplanes are usually assigned to the artillery commander. They are especially useful against targets which are invisible from the position of the artillery officer conducting the fire

Aeroplanes are safe from hostile fire at altitudes of 4,000 feet or more.

The results of reconnaissance are reported by radio telegraphy, signals, and the dropping of messages.

MESSAGES, REPORTS, MAPS, AND WAR DIARIES.

32. In the field the term "message" is generally applied to written information sent be messenger or wire. Such messages should be brief and clear, resembling telegrams. The source of the information contained in messages is always given, the writer carefully separating what he has actually seen himself from that received secondhand. Most of the rules adopted to secure clearness in orders apply equally to messages.

33. A report is a more or less formal account of some enterprise, undertaking, or event, such as a march, reconnaissance, battle, etc. A report is usually drawn up at comparative leisure, is often the supplement and expansion of short messages, and thus possesses the value of greater deatil.

34. In the field the maps available for general use are on a small scale. Those of our own country are prepared by the Geological Survey on a scale of 1 : 62500 (approximately 1 inch to the mile), with 20-foot contours. These maps are supplemented by field maps or sketches prepared from day to day. For facility in reading, military maps are made according to a uniform system of scales and contour intervals, as follows: One inch to 1 mile, V. I. 60 feet; 3 inches to 1 mile, V. I. 20 feet; 6 inches to 1 mile, V. I. 10 feet; 12 inches to 1 mile, V. I. 5 feet.

As a rule, road sketches are made on a scale of 3 inches to 1 mile, V. I. 20 feet; position and outpost sketches, 6 inches to 1 mile, V. I. 10 feet. The 1-inch map is used for extended operations; the 12-inch map for the war game or for the discussion of operations at maneuvers, and in siege operations.

As sketches must be made rapidly, often on horseback, unnecessary conventional signs are omitted. Sketches are useful to supplement messages and to elucidate reports of campaigns and battles.

35. A war diary is a record of events kept in campaign by each battalion and higher organization, each ammunition, supply, engineer, and sanitary train. Entries are made daily and should form a concise history of the military operations. A day comprises 24 hours covered by the date.

Each day's record will commence with a march table, or statement of the operations or location of the organization, including an account of weather, roads, camp, health of troops, etc., and a statement of the supply of ammunition, rations, and forage. This will be followed by a chronological record of events, including time and place of issue and receipt of orders and messages, with a copy or a synopsis of contents.

It is of special importance that the exact hour and place at which movements are begun and ended, and orders or important messages sent or received, be noted. After an engagement, the war diary will contain a report of losses and captures and will be accompanied by a sketch showing the positions of the command at the most important phases.

Each day's record will be attested by the commander or by the adjutant; and, with attached copies of orders and messages sent and received, will be forwarded daily to the next higher commander, who, as soon as practicable after the receipt thereof, will forward the war diary direct to the War Department.

Commanders of armies, or of units not components of a higher command, will forward their war diaries direct to the War Department.

TRANSMISSION OF INFORMATION.

36. Information is transmitted as follows:

1. By wire (telegraph, buzzer, telephone).
2. By visual signaling (flag, helio, night lamp).
3. By radio telegraph.
4. By messenger (foot, mounted, cycle, motor car, flying machine).

Information over considerable distances is usually transmitted by wire or radio telegraph. For short distances,[1] and when other means are not available, information is carried by messenger. When messages are sent by wire or radio telegraph they are always handed the operator in writing. The telephone is not as accurate as the telegraph, and when used the parties concerned do the talking, if practicable. All available means are utilized to facilitate the transmission of information, and it is the duty of all officers to assist in the transmission of orders and messages.

It is frequently advisable to send information not only to the proper superior, but to neighboring troops as well. When copies of messages are so sent the fact is noted upon each. In large commands information as to the situation of neighboring troops is often of great importance. In such cases "information officers" with messengers are sent to accompany such troops. These officers send to their own commanders all information of military importance to them.

Messages carried by messenger are usually inclosed in envelopes properly addressed. The envelope when not marked "confidential" is left unsealed, so that commanders along the line of march may read the contents. Upon the envelope is written the name of the messenger, his time of departure, and rate of speed. The latter is indicated as follows: Ordinary, rapid, or urgent. Ordinary means about 5 miles an hour for a mounted man; rapid, about 7 or 8 miles an hour; and urgent, the highest speed consistent with certainty of arrival at destination. The recipient notes the time of receipt upon the envelope and returns the latter to bearer

When there is danger of falling into the hands of the enemy, messages are sent in cipher.

Important information is sent by two or more messengers, depending upon the dangers of the road. It may be advisable to send duplicate messages by different routes. Messengers are informed before starting of the purport of the message, and where they are to report after it is delivered.

---

[1] For instance, at urgent speed and for distances up to about half a mile, a mounted messenger can deliver a message of 10 words in less time than the same can be delivered by wire.

When the usual means of communication can not be established, or fail to work, relay lines of mounted men may become necessary. When such lines are established connecting posts are generally placed on the roads at well-marked points, such as crossroads, bridges, etc. The distance between posts depends upon the rapidity of transmission desired, the number of men available, and the location of suitable stations. The usual distance is from 5 to 10 miles. The strength of such posts varies from six men and a noncommissioned officer to half a troop. A record is kept at each post of all communications received and transmitted.

Article II.

SECURITY.

GENERAL PRINCIPLES.

37. Security embraces all those measures taken by a command to protect itself from observation, annoyance, or surprise by the enemy.

Ordinarily this security is provided in part by the independent cavalry, which, operating far to the front, checks the opposing cavalry and sends in timely information of the movements of the enemy. But as a command is not always preceded by independent cavalry, and as this cavalry can not always prevent sudden incursions of the enemy or discover his patrols, additional security becomes necessary. This is obtained by covering the immediate front of the command with detachments.

On the march these detachments are called advance, flank, or rear guards; in camp or bivouac they are called outposts.

The object of the former is to facilitate the movement of the main body and to protect it from surprise and observation; the object of the latter is to secure the camp or bivouac against surprise and to prevent an attack upon it before the troops can prepare to resist.

On the march these detachments facilitate the advance of the main body by promptly driving off small bodies of the enemy who seek to harass or delay it; by removing obstacles from the line of advance; by repairing roads, bridges, etc., thus enabling the main body to advance uninterruptedly in convenient marching formations.

They protect the main body by preventing the enemy from firing into it when in close formation; by holding the enemy and enabling the main body to deploy before coming under effective fire; by preventing its size and condition from being observed by the enemy; and, in retreat, by gaining time for it to make its escape or to reorganize its forces.

As the principal duty of these bodies is the same, viz, that of protecting the main body, there is a general similarity in the formations assumed by them. There is (1) the cavalry covering the front; next (2) a group, or line of groups, in observation; then (3) the support, or line of supports, whose duty is to furnish the observation groups, and check the enemy pending the arrival of reinforcements; still farther in rear is (4) the reserve.

38. The march order of the whole command should explain the situation, and among other things, detail the commander and troops for each covering detachment. It should specify the route to be taken and the distance to be maintained between the main body and its covering detachments. It should order such reconnaissance as the commander specially desires to have made.

The order of the commander of a covering detachment should clearly explain the situation to subordinates, assign the troops to the subdivisions, prescribe their distances, and order such special reconnaissance as may be deemed necessary in the beginning.

39. An advance or flank guard commander marches well to the front and, from time to time, orders such additional reconnaissance or makes such changes in his dispositions as the circumstances of the case demand.

In large commands troops from all arms are generally detailed, the proportion from each being determined by the tactical situation; but commanders detail no more troops than the situation actually requires, as an excessive amount of such duty rapidly impairs the efficiency of a command. As a general rule troops detailed on the service of security vary in strength from one-twentieth to one-third of the entire command, but seldom exceed the latter. When practicable, the integrity of tactical units is preserved.

In mixed commands infantry usually forms the greater part of the troops detailed to the service of security. Cavalry is assigned to that duty whenever advantage can be taken of its superior mobility. The kind and amount of artillery are determined by circumstances.

Engineer, signal, and sanitary troops are detailed when required.

The field trains of troops on this duty generally remain with the field train of the command, but if conditions permit they may join their organizations.

Troops on the service of security pay no compliments; individuals salute when they address, or are addressed by, a superior officer.

ADVANCE GUARDS.

40. An advance guard is a detachment of the main body which precedes and covers it on the march.

Its duties are:

1. To guard against surprise and furnish information by reconnoitering to the front and flanks.
2. To push back small parties of the enemy and prevent their observing, firing upon, or delaying the main body.
3. To check the enemy's advance in force long enough to permit the main body to prepare for action.
4. When the enemy is encountered on the defensive, to seize a good position and locate his lines, care being taken not to bring on a general engagement unless the advance-guard commander is empowered to do so.
5. To remove obstacles, repair the road, and favor in every way possible the steady march of the column.

41. Strength and Composition.—Subject to variation according to the situation, one-twentieth to one-third of a command may be assumed as a suitable strength for the advance guard. The larger the force, the larger in proportion is the advance guard, for a large command takes relatively longer to prepare for action than a small one. In large commands it is usually composed of all arms, the proportions depending on the nature of the work, character of the country, etc. In open country it should be strong in cavalry and field artillery, but artillery is seldom assigned to the advance guard of a command not larger than a brigade. In such cases, however, when there is artillery with a command, an officer of that arm usually accompanies the advance guard for purposes of artillery reconnaissance. In swampy country or jungle it may be formed of infantry alone. When not preceded by independent cavalry, the advance guard must, as a rule, be strong in cavalry; in such cases the commander determines whether to attach all of the divisional cavalry to the advance guard, or to retain a part for some special service.

Machine guns materially increase the effectiveness of an advance guard. They are useful in holding bridges, defiles, etc., until reenforcements can be brought up.

Engineers are usually attached to an advance guard to remove obstacles, repair roads, etc. Circumstances may require a bridge train to be attached.

The supreme commander generally retains control of the signal troops, and establishes such lines of information as he deems necessary. However, when the nature of the country favors communication by signaling, signal troops may be attached to the advance guard.

An ambulance company usually accompanies large advance guards.

42. Distance from Main Body.—The distance at which the advance guard precedes the main body, or the main body follows the advance guard, is stated in the march order. In small commands, where there is no difficulty in keeping touch with the main body, the march order generally requires the advance guard to regulate its march on the main body; but where the advance guard is large, or moves at a considerable distance in advance of the main body, the latter regulates its march on the advance guard.

While the distance between these two bodies should be great enough to prevent needless interruptions in the march of the main body, and to give the latter time to deploy should the enemy be encountered, it should never be so great that timely support of the advance guard becomes impracticable.

43. Advance Guard Commander.—On receipt of the march order the advance guard commander estimates the situation and, at the proper time, issues the advance-guard order. This order divides the advance guard into its tactical components (advance cavalry, support, etc.), and gives the necessary instructions for each.

The advance-guard commander is mounted and goes wherever he deems his presence necessary, though his habitual station is at the head of the reserve, or with the support when there is no reserve. He conducts the advance so as not to interrupt the steady march of the main body, and, when ordered to move at a certain distance in front of the latter, maintains the necessary connection therewith. He bears constantly in mind the duties of an advance guard, and studies the ground with a view to tactical dispositions should the enemy be encountered.

44. Distribution of Troops.—An advance-guard order generally prescribes the following distribution of troops:

Advance cavalry.
Support.
Reserve.

The manner in which the advance-guard cavalry is employed depends upon the situation. Its proper place is in the direction of the enemy, and generally all or the greater part is used as advance cavalry. If weak in numbers, it may be assigned to the support.

45. Advance Cavalry.—The advance cavalry is that part of the advance-guard cavalry preceding the support. It reconnoiters far enough to the front and flanks to guard the column against surprise by artillery fire, and to enable timely information to be sent to the advance-guard commander. If preceded by independent cavalry, the advance cavalry maintains connection therewith, except when prevented by uncontrollable reasons; if not preceded by independent cavalry, it pushes well out and endeavors to find the enemy, performing to a limited extent the functions of independent cavalry. Its commander should be bold, energetic, and capable; he sees that his command is supplied with articles required by patrols.

46. Support.—Following the advance cavalry is the support, varying in strength from one-fourth to one-half of the advance guard. In mixed commands it consists of infantry, to which engineers may be attached. If there is no advance cavalry, some cavalry should be attached to the support for reconnoitering duty.

As the support moves out it sends forward an advance party several hundred yards, the distance varying with the terrain and the size of the command.

The advance party supplements the work of the advance cavalry, reconnoitering to the front and flanks to guard the support against surprise by effective rifle fire. The patrol preceding the advance party on the line of march is called the point, and is commanded by an officer or an experienced noncommissioned officer.

With the advance cavalry in front but little reconnoitering by infantry is necessary, and the advance party is relatively small—one-eighth to one-third of the support. If there is no advance cavalry, the advance party is made stronger (about one-half of the support) and the flanks are guarded, if necessary, by additional patrols sent out from the support and even from the reserve.

The support commander ordinarily marches with the advance party, but goes wherever needed. He sees that the proper road is followed; that guides are left in towns and at crossroads; that necessary repairs are made to roads, bridges, etc., and that information of the enemy or affecting the march is promptly transmitted to the advance-guard commander. He endeavors promptly to verify information of the enemy.

47. Reserve.—The reserve follows the support at several hundred yards distance. It consists of the remainder of the infantry and engineers, the artillery, and the ambulance company. The artillery usually marches near the head of the reserve, the engineers (with bridge train, if any) and special troops at the rear.

48. Reconnaissance.—In conducting the reconnaissance the patrols are, as a rule, small—from two to six men. If additional protection is necessary, a flank guard covers the threatened flank. The flanking patrols, whether of the advance cavalry or advance party, are sent out to examine the country wherever the enemy might be concealed If the nature of the terrain permits, these patrols march across country or along roads and trails paralleling the march of the column. For cavalry patrols this is often possible; but with infantry patrols and even with those that are mounted, reconnaissance is generally best done by sending the patrols to high places along the line of march to overlook the country and examine the danger points. These patrols report or signal the results of their observations and, unless they have other instructions, join their units by the most practicable routes, other patrols being sent out as the march proceeds and as the nature of the country requires.

Deserters, suspicious characters, and bearers of flags of truce,[1] the latter blindfolded, are taken to the advance guard commander

Civilians are not permitted to precede the advance guard.

Communication between the fractions of an advance guard and between the advance guard and main body is maintained by wire, messenger service, or signals.

ADVANCE GUARD OF A SMALL COMMAND.

49. In forming the advance guard of a command smaller than a brigade, the foregoing distribution is modified, depending upon the situation. A company or troop usually sends forward only a point, a battalion or squadron, an advance party; but a battalion or squadron at war strength should put a company or troop in the advance guard and a regiment should put a battalion or squadron, if an enemy is liable to be met. Whenever the advance guard is less than a battalion, there is no reserve.

50. Advance Guard of a Cavalry Command.—Cavalry marching independently adopts formations for its advance guard similar to those described above, though the distances are generally greater.

---

[1] See Rules of Land Warfare, U. S. Army relative to reception of bearers of flags of truce, etc.

ADVANCE GUARD OF A DIVISION (INDEPENDENT).

51. Assuming that the advance guard consists of one brigade of infantry, one squadron, one battalion of artillery, one company of engineers, and an ambulance company, the distribution (with independent cavalry) might be made as follows:

Independent cavalry.

(One or two marches.)

Advance guard.

Advance cavalry.—One squadron with point and flanking patrols; communication maintained with independent cavalry. (Point of advance cavalry to point of advance party at least 4 or 5 miles.)

Support.—One regiment of infantry and mounted detachment of engineers. The support sends forward its advance party, one company, about 500 yards; the advance party is preceded from 300 to 500 yards by its point.

(About 1,000 yards.)

Reserve—in order of march.—One battalion infantry; one battalion artillery; two battalions of infantry; one regiment infantry; company engineers (less detachment); ambulance company. (There may be a detachment of signal troops, though the division commander generally retains control of those troops.)

(One to two miles.)

Main body.

SECURITY FOR THE HEAD OF A RETREATING FORCE.

52. In retreat a column is preceded by a body of troops designated "leading troops," whose principal duty is to clear the road of obstacles and facilitate the withdrawal of the command. The strength and composition of such troops are determined by the situation. Engineers are generally necessary; cavalry is assigned to this duty to afford protection against guerrillas or small hostile parties that may have succeeded in reaching the rear of the command. If the rear is seriously threatened, the leading troops march practically as an advance guard.

FLANK GUARDS.

53. The flanks of a column are protected in part by the advance guard, which carefully examines the ground on both sides of the line of march. It may be necessary, however, to provide additional security for a flank threatened by the enemy. This is done by sending a detachment, called a flank guard, to cover the exposed flank.

Flank guards vary in size from patrols to detachments of all arms. Their composition and formation depend upon the situation, though they are generally strong in cavalry on account of the necessity for rapid reconnaissance and communication. They may be composed exclusively of that arm, but when strong positions are to be held, or prolonged resistance to the enemy is expected, troops of all arms are necessary. Their duties are similar to these of an advance guard. They keep in constant touch with the column either by wire, signal, or messenger service.

Flank guards may be sent out by an advance guard (made strong for that purpose) or by the main body; they march in a direction generally parallel to the column, keeping abreast of the unit from which detailed, or are sent to occupy favorable positions on a threatened flank, remaining there until the whole column has passed. In the latter case they join the rear guard and return to their commands at the end of the day's march. As a flank guard usually marches a greater distance than the body from which detailed, it is generally sent out in advance.

54. Flank Marches.—When the main body executes a flank march near the enemy, the flank guard becomes a body of great importance. If the flank march is due to a considerable change of direction in the march of the column, it is generally advisable to convert the advance guard into a flank guard, and detail a new advance guard to precede the column. If the troops making the flank march start from camp, a separate flank guard will have to be provided.

In long columns the large units, such as regiments, will provide their own flank observation.

REAR GUARDS.

55. The rear guard is charged with the important duty of covering the retreat.

When a commander decides to retreat, he issues the necessary order. During a retreat the outpost for the night usually forms the rear guard of the following day.

56. Strength and Composition.—The strength of a rear guard depends upon the nature of the country and the strength and character of the pursuing force. It can not, like the advance guard, count on the support of the main body.

Machine guns are especially useful in the passage of defiles and in covering the crossings of rivers.

Engineers and ambulance companies are usually assigned to rear guards.

The troops of a rear guard are selected from those that have had previous local successes, or have suffered little loss and are comparatively fresh.

57. Distribution of Troops.—The proximity and conduct of the enemy control, to a large extent, the formation of a rear guard. When it is not necessary to withdraw in deployed lines, the greater part of the rear guard marches on the road in column of route, taking up a formation resembling that of an advance guard faced to the rear. The distribution of troops is therefore similar to that of an advance guard, namely:

Reserve.
Support.
Rear cavalry.

The rear cavalry is that portion of the rear guard cavalry following the support. The support, as in an advance guard, is divided into two parts; that part nearest the enemy is called the rear party and marches with a rear point. Mounted engineers usually accompany the support and may be attached to the rear party. Where the cavalry is of sufficient strength and has horse artillery attached, the entire rear guard, excepting the reserve, may be composed of that arm. The reserve is composed mainly of infantry and artillery.

58. Distances.—The distances of the rear guard from the main body and between the fractions of the rear guard are about the same as in the case of an advance guard. If marching at night, the rear guard draws nearer the main body.

REAR GUARD OF AN ADVANCING FORCE.

59. If there is a possibility that the rear of the column may be attacked, a rear guard of suitable strength and composition is provided. If the hostile attempts are confined to guerrillas, marauders, etc., the guard should be strong in cavalry. Its conduct is practically the same as that of the rear guard of a retreating force. It generally marches in rear of the trains, those organizations following the combatant troops without distance.

OUTPOSTS.

60. The size and disposition of the outpost will depend upon many circumstances, such as the size of the whole command, the proximity of the enemy and the situation with respect to him, the nature of the terrain, etc.

A suitable strength may vary from a very small fraction to one-third of the whole force. For a single company in bivouac a few sentinels and patrols will suffice; for a large command a more elaborate outpost system must be provided. It should be no stronger than is consistent with reasonable security.

The most economical protection is furnished by keeping close contact with the enemy by means of outpost patrols, in conjunction with resisting detachments on the avenues of approach.

The outpost should be composed of complete organizations.

61. In a brigade or smaller force on the march toward the enemy, the outpost is generally formed from the advance guard, and is relieved the following day when the new advance guard crosses the line of outguards. In a retreat, the detail for outpost duty is generally made from the main body. The new outpost becomes the rear guard the following day.

When, as in large forces, an advance and rear guard performs such duty for several days, the outpost, during this period, is furnished by the advance or rear guards.

When the command is small and stationary for several days, the outpost is relieved daily. In large commands, the outpost will, as a rule, be relieved at intervals of several days.

62. The positions held by the subdivisions of the outpost should generally be prepared for defense, but conditions may render this unnecessary.

Troops on outpost keep concealed as much as is consistent with the proper performance of their duties; especially do they avoid appearing on the sky line.

63. Composition.—A mixed outpost is composed principally of infantry. The infantry is charged with the duty of local observation, especially at night, and with resisting the enemy long enough for the main body to prepare for action. The cavalry is charged with the duty of reconnaissance, and is very useful in open country during the day.

If the infantry has been severely taxed by marching or fighting, a large part of the outpost may be temporarily formed of cavalry, When an outpost is detailed from the advance guard, the advance cavalry of the advance guard becomes the advance cavalry of the outpost and continues the work of reconnaissance until recalled for the night.

Artillery is useful to outposts when its fire can sweep defiles or large open spaces and when it commands positions that might be occupied by hostile artillery. The guns are carefully concealed or protected and are usually withdrawn at night.

Machine guns are useful to command approaches and check sudden advances of the enemy.

Engineers are usually attached to an outpost to assist in constructing entrenchments, clearing the field of fire, and opening communications laterally and to the rear.

The supreme commander generally retains control of the signal troops and establishes a line of information to the reserve and from the reserve to each support and important detached post.

It is generally unnecessary to attach any portion of the sanitary train to an outpost, as the equipment of the regimental aid station carried in the sanitary combat train will as a rule be sufficient. If necessary, dressing stations may be established by ambulance companies of the sanitary train in convenient location to the rear of the outpost line.

The field trains of troops on outpost duty generally join their organizations; if an engagement is probable, they may be held in rear.

64. Distribution of Outpost Troops.—The outpost will generally be divided into four parts. These, in order from the main body, are the reserve, the line of supports, the line of outguards, and the advance cavalry.

The distances separating these parts, and their distance from the main body, will depend upon the object sought, the nature of the terrain, and the size of the command. There can be no uniformity in the distance between supports and reserve, nor between outguards and supports, even in the same outpost. The avenues of approach and the important features of the terrain will largely control their exact positions.

The outpost of a small force should ordinarily hold the enemy beyond effective rifle range of the main body until the latter can deploy. For the same purpose the outpost of a large force should hold the enemy beyond artillery range.

65. The reserve constitutes the main body of the outpost and is held at some central point from which it can readily support the troops in front or hold a rallying position on which they may retire.

The reserve may be omitted when the outpost consists of less than two companies.

The reserve may comprise one-fourth to two-thirds of the strength of the outpost.

66. The supports constitute a line of supporting and resisting detachments, varying in size from a half company to a battalion. They furnish the line of outguards.

The supports are numbered consecutively from right to left. They are placed at the more important points on the outpost line, usually in the line on which resistance is to be made in case of attack.

As a general rule, roads exercise the greatest influence on the location of supports, and a support will generally be placed on or near a road. The section which it is to cover should be clearly defined by means of tangible lines on the ground and should be such that the support is centrally located therein.

67. The outguards constitute the line of small detachments farthest to the front and nearest to the enemy. For convenience they are classified as pickets, sentry squads, and cossack posts. They are numbered consecutively from right to left in each support.

68. A picket is a group consisting of two or more squads, ordinarily not exceeding half a company, posted in the line of outguards to cover a given sector. It furnishes patrols and one or more sentinels, double sentinels, sentry squads, or cossack posts for observation.

Pickets are placed at the more important points in the line of outguards, such as road forks. The strength of each depends upon the number of small groups required to observe properly its sector.

69. A sentry squad is a squad posted in observation at an indicated point. It posts a double sentinel in observation, the remaining men resting near by and furnishing the reliefs of sentinels. In some cases it may be required to furnish a patrol.

70. A cossack post consists of four men. It is an observation group similar to a sentry squad, but employs a single sentinel.

At night it will sometimes be advisable to place some of the outguards or their sentinels in a position different from that which they occupy in the daytime. In such case the ground should be carefully studied before dark and the change made at dusk. However, a change in the position of the outguard will be exceptional.

71. Sentinels are generally used singly in daytime, but at night double sentinels will be required in most cases. Sentinels furnished by cossack posts or sentry squads are kept near their group. Those furnished by pickets may be as far as 100 yards away.

Every sentinel should be able to communicate readily with the body to which he belongs.

Sentinel posts are numbered consecutively from right to left in each outguard. Sentry squads and cossacks posts furnished by pickets are counted as sentinel posts.

72. By day, cavalry reconnoiters in advance of the line of observation. If there is independent cavalry in front, the advance cavalry maintains connection therewith and reconnoiters only where necessary. At night, however, that the horses may have needed rest and because the work can be better done by infantry, the greater part of the cavalry is usually withdrawn in rear of the supports, generally joining the reserve, small detachments being assigned to the supports for patrolling at a distance.

With efficient cavalry in front, the work of the infantry on the line of observation is reduced to a minimum.

General instructions for the advance cavalry are given by the outpost commander, but details are left to the subordinate.

73. Instead of using outguards along the entire front of observation, part of this front may be covered by patrols only. These should be used to cover such sections of the front as can be crossed by the enemy only with difficulty and over which he is not likely to attempt a crossing after dark.

In daylight much of the local patrolling may be dispensed with if the country can be seen from the posts of the sentinels. However, patrols should frequently be pushed well to the front unless the ground in that direction is exceptionally open.

74. Patrols or sentinels must be the first troops which the enemy meets, and each body in rear must have time to prepare for the blow. These bodies cause as much delay as possible without sacrificing themselves, and gradually retire to the line where the outpost is to make its resistance.

Patrols must be used to keep up connection between the parts of the outpost except when, during daylight, certain fractions or groups are mutually visible. After dark this connection must be maintained throughout the outpost except where the larger subdivisions are provided with wire communication.

75. In addition to ordinary outguards, the outpost commander may detail from the reserve one or more detached posts to cover roads or areas not in the general line assigned to the supports.

In like manner the commander of the whole force may order detached posts to be sent from the main body to cover important roads or localities not included in the outpost line.

The number and strength of detached posts are reduced to the absolute needs of the situation.

76. Establishing the Outpost.—The outpost is posted as quickly as possible, so that the troops can the sooner obtain rest. Until the leading outpost troops are able to assume their duties, temporary protection, known as the march outpost, is furnished by the nearest available troops.

77. The halt order of the commander, besides giving the necessary information and assigning camp sites to the parts of the command, details the troops to constitute the outpost, assigns a commander therefor, designates the general line to be occupied, and, when practicable, points out the position to be held in case of attack.

The outpost commander, upon receipt of this order, should issue the outpost order with the least practicable delay. In large commands it may often be necessary to give the order from the map, but usually the outpost commander will have to make some preliminary reconnaissance, unless he has an accurate and detailed map.

The order gives such available information of the situation as is necessary to the complete and proper guidance of subordinates; designates the troops to constitute the supports; assigns their location and the sector each is to cover; provides for the necessary detached posts; indicates any special reconnaissance that is to be made; orders the location and disposition of the reserve; disposes of the train if same is ordered to join the outpost; and informs subordinates where information will be sent.

Generally it is preferable for the outpost commander to give verbal orders to his support commanders from some locality which overlooks the terrain. The time and locality should be so selected that the support commanders may join their commands and conduct them to their positions without causing unnecessary delay to their troops. The reserve commander should, if possible, receive his orders at the same time as the support commanders. Subordinates to whom he gives orders separately should be informed of the location of other parts of the outpost.

In large outposts written orders are frequently most convenient.

After issuing the initial orders, the outpost commander inspects the outpost, orders the necessary changes or additions, and sends his superior a report of his dispositions.

78. The reserve is marched to its post by its commander, who then sends out such detachments as have been ordered and places the rest in camp or bivouac, over which at least one sentinel should be posted. Connection must be maintained with the main body, the supports, and nearby detached posts.

79. The supports march to their posts, using the necessary covering detachments when in advance of the march outpost. A support commander's order should fully explain the situation to subordinates, or to the entire command, if it be small. It should detail the troops for the different outguards and, when necessary, define the sector each is to cover. It should provide the necessary sentinels at the post of the support, the patrols to be sent therefrom, and should arrange for the necessary intrenching. Connection should be maintained with the adjoining supports and with the outguards furnished by the support.

In posting his command the support commander must seek to cover his sector in such manner that the enemy can not reach, in dangerous numbers and unobserved, the position of the support or pass by it within the sector intrusted to the support. On the other hand, he must economize men on observation and patrol duty, for these duties are unusually fatiguing. He must practice the greatest economy of men consistent with the requirements of practical security.

As soon as the posting of the support is completed, its commander carefully inspects the dispositions and corrects defects, if any, and reports the disposition of his support, including the patrolling ordered, to the outpost commander. This report is preferably made by means of a sketch.

80. Each outguard is marched by its commander to its assigned station, and especially in the case of a picket, is covered by the necessary patrolling to prevent surprise.

Having reached the position, the commander explains the situation to his men and establishes reliefs for each sentinel, and, if possible, for each patrol to be furnished. Besides these sentinels and patrols, a picket must have a sentinel at its post.

The commander then posts the sentinels and points out to them the principal features, such as towns, roads, and streams, and gives their names. He gives the direction and location of the enemy, if known, and of adjoining parts of the outpost.

He gives to patrols the same information and the necessary orders as to their routes and the frequency with which the same shall be covered. Each patrol should go over its route once before dark

81. Every picket should maintain connection by patrols with outguards on its right and left. Each commander will take precaution to conceal his outguard and will generally strengthen his position by intrenching.

82. Relieving the Outpost.—Evening and shortly before dawn are hours of special danger. The enemy may attack late in the day in order to establish himself on captured ground by intrenching during the night; or he may send forward troops under cover of darkness in order to make a strong attack at early dawn. Special precaution is therefore taken at those hours by holding the outpost in readiness, and by sending patrols in advance of the line of observation. If a new outpost is to be established in the morning, it should arrive at the outpost position at daybreak, thus doubling the outpost strength at that hour.

83. Examining Posts.[1]—An examining post is a small detachment, under the command of an officer or a noncommissioned officer, stationed at some convenient point to examine strangers and to receive bearers of flags of truce brought in by the outguards or patrols.

Though the employment of examining posts is not general in field operations, there are many occasions when their use is important; for example: When the outguards do not speak the language of the country or of the enemy; when preparations are being made for a movement and strict scrutiny at the outguards is ordered; at sieges, whether in attack or defense. When such posts are used, strangers approaching the line of observation are passed along the line to an examining post.

No one except the commander is allowed to speak to persons brought to an examining post. Prisoners and deserters are at once sent under guard to the rear.

---

[1] See Rules of Land Warfare, U. S. Army, relative to reception of bearers of flags of truce, etc.

Article III.

ORDERS.

GENERAL PRINCIPLES.

84. The art of giving proper instructions and orders to troops is one of the most important features in the exercise of command.

The expression of the will of leaders is conveyed in letters of instruction or by written or verbal orders.

LETTERS OF INSTRUCTION.—At the beginning of operations and from time to time thereafter the plans of the superior leaders are communicated in the form of letters of instruction. These regulate movements over large areas and for considerable periods of time. (See Combat Orders, page 75.)

85. Field Orders,—Field orders regulate the tactical and such strategical actions of troops as are not carried in letters of instruction. (See Combat Orders, page 75.)

The field orders of field army and division commanders are almost invariably written. When conditions demand the issuance of verbal orders, written orders follow The field orders of brigade commanders are usually written The field orders of regimental and smaller unit commanders are usually verbal.

The object of field orders is to bring about a course of action, in accordance with the intention of the leader, suited to the situation and with full cooperation between all arms and services. They are issued for marches, halts, formation of camps or bivouacs, advance, flank and rear guards, outposts, combat, etc.

In active operations, especially during engagements, numerous field orders are issued in fragmentary form—either verbally or in the form of notes, brief dispatches, messages, orders for assembly, etc.—which do not contain all the requirements of a formal written field order; but whenever detailed instructions for operations are given, whether verbally or in writing, the sequence prescribed for the body of a formal field order is preserved

Administrative details are usually covered in "orders," but when circumstances make it more convenient they may be included in field orders.

86. To give subordinate leaders an oportunity to study the situation, field orders should reach them in ample time. As a rule, however, it is desirable to keep contemplated movements secret as long as possible, and to confine knowledge thereof to chiefs of staff departments and leaders of the larger units.

In large commands it requires some time for formal orders to reach all the lower units; this may be roughly estimated at one hour for a brigade and one hour and a half for a division.

The hour stated in the heading of an order is the hour of signature.

87. Orders not connected with the tactical or strategical action of troops, but necessary in the ordinary administration of military affairs, are called general orders, orders, and special orders, according to circumstances.

General Orders.—General orders include, generally, (1) all detailed instructions necessary in carrying out certain general regulations or orders issued from a superior headquarters; (2) all standing instructions, to the end that frequent repetition may be avoided; and (3) proceedings of general and special courts-martial.

General orders are issued by commanders of armies, field armies, divisions, brigades, regiments, and separate battalions.

Orders.—Orders, in contradistinction to field, general, and special orders, are used by commanders of divisions and separate brigades for regulating the movements and resupply of the field trains, fixing the position of distributing points (rations and forage), authorizing the use of reserve rations, providing for the refilling of combat trains after combat or a march, providing for ambulance and hospital service in camps, and for furnishing such other similar information or instructions as it is desired to communicate to troops. They also include such instructions as may be sent to the commander of trains, relative to the movements and disposition of the trains and information with regard to the arrangements made with the line of communication relative to the positions of refilling, rendezvous, and evacuation points.

When necessary, orders are used by commanders of battalions forming parts of regiments, and smaller units and detachments, for the same class of instructions as are promulgated by higher commanders in general orders.

Special Orders.—These cover only such matters relating to the movements or assignment of individuals as are not necessary to be communicated generally to the command.

88. Verbal Orders.—When not communicated by the leader in person, verbal orders are carried by staff officers or messengers. Important verbal orders are recorded as soon as practicable after issue.

As there is always a possibility of controversy as to their wording, verbal orders are sent by messengers in cases of necessity only, and when so sent rarely contain more than one definite mandate. For example: "The brigade will halt three hours at ——." More latitude is allowed in sending verbal orders by officers.

The bearer of a verbal order or message is required to repeat it before starting.

COMPOSITION OF FORMAL FIELD ORDERS.

89. To frame a suitable field order, the leader must make an estimate of the situation, culminating in a decision upon a definite plan of action. He must then actually draft or word the orders which will carry his decision into effect.

An estimate of the situation involves a careful consideration, from the commander's view point, of all the circumstances affecting the particular problem. In making this estimate he considers his mission as set forth in the orders or instructions under which he is acting, or as deduced by him from his knowledge of the situation, all available information of the enemy (strength, position, movements, probable intentions, etc.), conditions affecting his own command (strength, position, supporting troops, etc.), and the terrain in so far as it affects the particular military situation. He then compares the various plans of action open to him and decides upon the one that will best enable him to accomplish his mission.

Clear and decisive orders are the logical result of definite and sure decisions and are the means of transforming the decision into action.

In framing field orders the integrity of tactical units is preserved whenever practicable.

Field orders must be clear and definite. Expressions depending upon the view point of the observer, such as right, left, in front of, behind, on this side, beyond, etc., are avoided, reference being made to points of the compass instead. The terms right and left, however, may be applied to individuals or bodies of men, or to the banks of a stream; in the latter case the observer is supposed to be facing downstream. The terms right flank and left flank are fixed designations. They apply primarily to the right and left of a command when facing the enemy and do not change when the command is retreating. The head of a column is its leading element, no matter in what direction the column is facing; the other extremity is the tail.

To minimize the possibility of error, geographical names are written or printed in ROMAN CAPITALS; when the spelling does not conform to the pronunciation, the latter is shown phonetically in parentheses, thus: BICESTER (Bister), GILA (Hee′-la).

When two or more places or features on the map have the same name they are distinguished by reference to other points.

A road is designated by connecting two or more names of places on the road with dashes, thus: LEAVENWORTH—LOWEMONT—ATCHISON road.

As a rule, an affirmative form of expression is used. Such an order as: "The supply train will not accompany the division," is defective, because the gist of the order depends upon the single word "not."

Written orders should be so distinct as to be legible even in bad light.

Field orders are brief; short sentences are easily understood; conjectures, expectations, reasons for measures adopted, and detailed instructions for a variety of possible events, do not inspire confidence, and should be avoided.

The commander should accept the entire responsibilty. In framing field orders such expressions as "attempt to capture," "try to hold," "as far as possible," "as well as you can," etc., are forbidden. They tend to divide responsibility between the commander and his subordinates.

An order should not trespass upon the province of a subordinate. It should contain everything beyond the independent authority of the subordinate, but nothing more

When the transmission of orders involves a considerable period of time, during which the situation may change, detailed instructions are avoided. The same rule holds when orders may have to be carried out under unforeseen circumstances. In such cases letters of guidance are preferable; they lay stress upon the object to be attained, and leave open the means to be employed. Orders attempting to arrange matters too far in advance may have to be recalled and others substituted; such changes impose needless hardships upon a command and injure its morale.

Details of time and place are carefully stated. Subordinate commanders and staff officers regulate their watches by the time kept at headquarters.

Orders issued by subordinates should not be mere repetitions of those from higher authority with additions of their own. New orders are generally clearer and more satisfactory

---

[1] For details of field orders for combat see pars. 142–149, incl.

FORM OF FIELD ORDERS. (See page 182.)

90. To enable the will of the commander to be quickly understood, to secure prompt cooperation among his subordinates and for ready reference, field orders are required to follow a general form. This form divides an order into sections or parts and assigns to each a particular class of information.

The parts of a field order are:

The heading.
The distribution of troops (in certain orders).
The body.
The ending.

91. The Heading.—The heading contains the title or name of the issuing officer's command, the place, date, hour of issue, the number of the order and reference to map used.

Titles are expressed as follows:

Det. 1st Div.
Outpost, 6th Inf.
Advance Guard, 3d Div
1st Brig. 1st Div
3d Div.

In the above titles "Det. 1st Div." means that the command is composed of troops from the first division; "Advance Guard, 3d Div." means that the command is the advance guard of the third division.

The title may appear in the order creating a command, thus 'The Second Brigade will constitute the advance guard."

The title with place, date, and number thus fully identifies an order.

Whether named in the title or elsewhere in the order, the abbreviated form for the designation of tactical organizations is preferable. (See Appendix 9, List of Abbreviations.)

When a fraction of an organization can not be designated by naming one or more of the subdivisions, it receives the generic title of "detachment."

A detachment is a body of troops separated from a higher command and intrusted with a special mission.

Nearly every command of any size is composed of troops from the different arms or special services, or both, and when not constituting a division, brigade, or other authorized unit, the question arises whether to call such a command a "detachment" or to give it the tactical designation of the predominating arm or special service. If there is a predominating element the title of the command is that of the predominating element, unless the proportion of auxiliary troops or special troops equals or exceeds that prescribed for a division, in which case the command is a detachment. For example: A command consisting of 1 regiment of infantry and 1 squadron is a detachment, while the title of a command consisting of 1 regiment of infantry and a troop is that of the regiment.

Dates in the heading are abbreviated thus: 4 Feb. 08, 2-45 P. M.

92. The Distribution of Troops.—The distribution of troops shows the tactical components into which a command is divided (advance guard, main body, etc.) and the troops assigned to each. It is generally used in march orders and in the first field order applying to a command newly created or organized. In other cases it is usually more convenient to name the troops in the body of the order, where their duties are prescribed.

When a "distribution" is used it is headed "Troops," and in written or printed orders is placed on the left of the body, occupying about one-third of the page. The tactical components are marked with lettered subheads (*a*), (*b*), etc., the troops listed under each performing the task prescribed in the similarly marked paragraph of the body of the order.

When orders are dictated or sent by wire or signals, the distribution of troops (if used) is given immediately after paragraph 2, without number.

93. The Body.—The body contains information and instructions for the command, and is arranged in numbered paragraphs as follows:

Paragraph 1 contains such information of the enemy and of our supporting troops as it is desirable that subordinates should know.

Paragraph 2 contains the general plan of the commander, or so much thereof as will insure cooperation of all parts of the command.

Paragraph 3 contains the detailed tactical dispositions adopted by the commander to carry out the plan outlined in paragraph 2, including the tasks assigned to each of the several combatant fractions of the command. These tasks are given under lettered subheads (*a*), (*b*), etc., the leading fraction, or the one having the most important duty to perform, being generally considered first. For instance: In an attack order it is customary to consider the artillery first; in a march order, troops are considered according to their position in the column.

Instructions applicable to all of these fractions may be embodied in a subparagraph, lettered (*x*), at the end of paragraph 3.

Paragraph 4 contains instructions for the trains, and may designate the position of ammunition distributing stations, dressing stations, and stations for slightly wounded.

The last paragraph, usually paragraph 5, shows where the commander can be found or messages may be sent. In orders of subordinate commanders, this paragraph also gives the location of "lines of information," if any have been established.

If additional paragraphs are necessary, they are incorporated, properly numbered, after paragraph 4. Sometimes it is unnecessary to include instructions for the trains; but whatever the number of paragraphs the last always shows where the commander can be found, etc.

No abbreviations are used in the body of the order except A. M and P. M. for morning and afternoon, the authorized abbreviations for tactical organizations, and those customary in designating rank. In naming a night both days should be mentioned thus: Night 4/5 Feb. 08. To designate "noon" and "midnight" these words are written.

94. The Ending.—The ending contains the authentication of the order and a statement of how it is communicated to the command. This statement is an important feature of a field order and is made by the officer signing the order, he being responsible that it is properly distributed.

95. Before orders are issued they are carefully tested to see that the entire command is accounted for.[1]

---

[1] For forms of orders see Appendix 3.

Article IV.

MARCHES AND CONVOYS.

GENERAL PRINCIPLES.

96. A successful march, whether in peace or war, is one that places the troops at their destination at the proper moment and in the best possible condition. In war, marches are of daily occurrence, and success depends in a great measure upon the skill with which they are conducted.

Good marching is secured by careful preparation, strict discipline, and the due observance of march sanitation.

While conforming to other requirements, marches are conducted so as to reduce to a minimum the hardships of the troops.

When possible, ample notice is given so that preparations can be made without haste.

The march is habitually at route order

Troops are informed of the length of halts so that they can take full advantage of the same.

The men are not kept under arms longer than necessary, nor required to carry heavy burdens when transportation is available.

Special care is paid to the feet of the men and to the hoofs and backs of animals.

In prolonged marches at least one day in seven should be a day of rest.

A forced march is never undertaken unless the situation requires it.

As a rule troops on the march pay no compliments; individuals salute when they address, or are addressed by, a superior officer.

The conduct of a march (forming the column or columns, distribution of troops, the start, rate, length of march, etc.) is controlled by the situation and object to be accomplished.

CONDUCT OF MARCHES.

97. Preparation.—It is the duty of the commander to see that the necessary preparations are made—that the men and animals are in fit condition and that they are properly equipped; that all trains accompanying the command are loaded as prescribed; that proper measures have been inaugurated for the replenishment of supplies, and that the necessary arrangements have been made for the care and evacuation of the sick and wounded.

98. Forming the Column.—To form the column for a march, the commander issues the necessary orders (march order).

The march order states the object of the march, gives the distribution of the troops, order of march of the main body, manner of forming the column, etc If the command consists of two or more columns, the order of the supreme commander generally indicates the march to be made by each column, and the column commanders issue corresponding march orders.

When troops are encamped or bivouacked at some distance from the road, columns are formed by the successive arrival of the fractions at an initial or starting point, which, as a rule, is located in the direction of the proposed march. The commander fixes the initial point after considering the position of the troops and the roads by which they can join the column. He also prescribes the hour at which the leading fraction or fractions clear the initial point, and, if necessary, the routes to be followed in reaching it. To prevent needless marching, he may designate special initial points for parts of the command.

As a general rule, the larger units of a command should be camped in the order in which they will march on the following day.

In drafting march orders, the road space and rate of march of the different fractions of the command and their distances from the initial point must be considered. With foot troops and cavalry marching four abreast, artillery and trains in single column of carriages, the following may be assumed for approximate calculations: Two men per yard for foot troops, one man per yard for each mounted man, 20 yards for each gun, caisson, or wagon, and 12 yards for each autotruck

Commanders of subordinate units examine the route to be followed, calculate the time required, and start their commands accordingly They may designate initial points for their own commands. In every case the initial point should be of easy access.

When troops are located on or near the roads to be followed, the commander prescribes the hour of starting for the larger units; the subordinate commanders issue corresponding orders for their commands.

99. Distribution of Troops.—The order of march of a column is controlled mainly (1) by tactical considerations, which are paramount in the presence of the enemy, and (2) by the rule requiring the hardships of troops to be reduced to a minimum.

During an advance the order of march of a column is generally as follows, the necessary security being provided:

Combatant troops (with combat trains):
1. Cavalry and horse artillery.
2. Infantry and light or mountain artillery.
3. Engineers and signal troops.
4. Trains, etc.

During a retreat the order of march is practically the reverse of the above.

In mixed commands, large bodies of cavalry and horse artillery should not be intermingled with foot troops.

A detachment of engineers usually marches near the head of each column to repair roads, strengthen bridges, etc.

The order of brigades in divisions, regiments in brigades, battalions or squadrons in regiments, and company units in battalions or squadrons is generally changed from day to day—the leading unit one day taking its place at the tail the following, and so on.

On the march, troops, as far as practicable, keep to the right of the road, leaving the left free. When the roads are narrow, space should still be left for messengers to pass freely along the column. When roads are soft with mud or heavy with sand or very dusty, it may be advisable to divide the column longitudinally, thus permitting men and animals to pick their way, the middle of the road being left clear. Care should be taken not to permit straggling or undue lengthening of the column.

Infantry usually marches in column of squads, column of twos when necessary; cavalry, in column of fours on good roads or when compact formation is desirable, otherwise in column of twos; artillery in section column (single column of carriages), or in double section column if the width of the road permits. On trails, troops march in column of files or troopers. In marching across country, the commander adopts the most advantageous formation.

100. The Start.—When practicable, marches begin in the morning, ample time being allowed for the men to breakfast, animals to feed, and the wagons or animals to be packed. The time for reveille and stables should be designated the evening before. Canteens are filled, fires put out, latrines covered, and the camp policed before departure.

The hour for the start depends upon circumstances. As a rule, foot troops do not start before broad daylight; mounted troops, when practicable, about an hour after broad daylight. Both men and animals rest well in the early morning hours.

The signals for striking camp and putting the command in march, such as the general, boots and saddles, etc., are ordered by the commanders of the larger units at the proper time. After the general, one or more officers of each organization superintend the preparations for the march.

The different units of the column, including those of the train, are separated at the start by distances prescribed in regulations or by the commander. These distances are temporarily increased or diminished, according to circumstances, thus facilitating uniform progress without checks, and with a continual tendency to the gradual resumption of normal distances.

101. Rate and Length of Marches.—The rate of march of a mixed command is regulated by that of the foot troops. It varies with the length of the march, size of the command, condition of the troops, and other circumstances; sandy, rough, muddy, or slippery roads, great heat and dust, strong headwinds, storms and broken country, reduce the rate. If hills are to be climbed or swampy country is to be crossed, or defiles passed, liberal allowances are made in time calculations.

For infantry the rate prescribed for drill is 100 yards a minute or 3.4 miles an hour; on the road the maximum to be counted on is 88 yards a minute or 3 miles an hour, including halts 2¼ to 2¾ miles. The rate of infantry columns, under average conditions, may be assumed at 2¼ to 2½ miles an hour.

The average march of infantry, and of mixed commands consisting partly of foot troops, is 15 miles a day; but in extensive operations, involving large bodies of troops, the average is about 12 miles a day. Small commands of seasoned infantry marching on good roads in cool weather, can average 20 miles a day.

It is of great importance that a uniform rate of march be maintained throughout the column. When a change in the rate is to be made, warning is sent along the column.

For cavalry the rates prescribed for drill are:

The walk 4 miles, the trot 8 miles, and the gallop 12 miles an hour. The average walk of a horse is at the rate of a mile in 16 minutes or 3¾ miles an hour; the average trot, a mile in 8 minutes or 7½ miles an hour.

In the field the usual gait is the walk of 3¾ miles an hour, including halts 3¼ to 3½ miles an hour.

The average march of cavalry, after men and animals are hardened, is 25 miles a day.

The daily march of field artillery is the same as that of the command of which it forms a part; if alone it covers from 15 to 20 miles. The rate of horse artillery is the same as that of the cavalry to which it is attached.

The rate of a wagon train varies with the class and condition of the draft animals, the load, length of the column, and the condition of the roads. While large mules drawing light loads on good roads can cover nearly 4 miles an hour, in long columns a rate of 2 miles, including halts, is all that can be expected even under favorable conditions; small trains may make 2½ miles an hour. The daily march of a wagon train is about the same as that of infantry.

The average load of a pack mule is 250 pounds, and a train thus loaded can travel from 20 to 25 miles a day on ordinary roads or trails; over rough country, from 10 to 15 miles.

The rate of march, the load, and the distance that may be covered in a day with autotrucks or with tractors drawing wagons are dependent on the character and condition of the roads and the carrying or pulling power of the trucks or tractors.

102. **Halts.**—To rest the men and animals and for other purposes, a command on the march is occasionally halted. The first halt is made after marching about three-quarters of an hour, and is about 15 minutes long, to enable the men to attend to the calls of nature and to adjust their clothing, etc. Judgment should be exercised in selecting the place for the first halt; it should not be made in a village or place where one of the objects of the halt would be defeated.

After the first rest, there is for foot troops a halt of about 10 minutes every hour—that is, the troops march 50 minutes and then halt 10. In very hot weather the halts may be longer and more frequent. The men are allowed to fall out, but remain in the immediate vicinity of their places.

For cavalry the hourly halts are shorter—5 minutes; the men examine the horses' feet, adjust saddles, etc.

For artillery the hourly halts are from 5 to 10 minutes; harness is adjusted, girths are tightened, etc.

As a rule troops prefer to finish a day's march as soon as possible. In good weather, with favorable temperature, long halts are not desirable on marches of less than 15 miles for infantry or 25 miles for cavalry. When the day's march will run well into the afternoon, a halt of about one hour near meal time is advantageous. Places for long halts should be selected with care; wood, water, grass, dry ground, and shade are desirable features. Arms are stacked and equipments removed; mounted troops dismount and loosen cinchas.

In hot weather, especially in the tropics, it may be desirable to avoid the midday heat. If the march is long, the command may make an earlier start, or it may rest for three or four hours during the hottest part of the day and finish the march in the evening. As a general proposition, however, it is undesirable to arrive at a strange place after nightfall or even late in the afternoon.

Halts are not made in or near towns or villages unless to procure water or supplies, and when so made, the men remain in column, details being sent for whatever is necessary In commands not exceeding a regiment, and in wagon trains of less than a mile in length, the units may halt simultaneously, the signal from the head being promptly repeated This may also be accomplished in longer columns by the commanders of units setting their watches at the same hour before starting, and agreeing when the halts shall be made; the units all halt and resume the march at the moments agreed upon.

103. Crossing Bridges, Fords, and Ferries.—When a cause of delay—for example, a damaged bridge—is encountered, the troops in rear are notified of the minimum length of the delay; they then conduct themselves as at regular halts.

In ascending or descending slopes, crossing streams or other obstacles, or passing through defiles requiring a reduction of front, every precaution is taken to prevent interruption of the march of the troops in rear. If the distances are not sufficient to prevent check, units are allowed to overlap; if necessary, streams are crossed at two or more places at the same time; in passing through short defiles the pace is accelerated and the exit cleared at once. If a company unit is delayed while crossing an obstacle, the head slackens the pace or halts until all of that unit has passed; it then resumes its place in the column, increasing the pace if necessary.

Before attempting to cross with bodies of troops, careful examination is made of fords, boggy places, bridges of doubtful character, ice, etc., as the case may be.

When necessary, an officer is designated to superintend the crossing; his instructions must be strictly observed, the troops crossing in formation prescribed by him. Foot troops crossing bridges march without cadence.

Whenever a military bridge is constructed with the bridge equipage, or if deemed necessary, in cases where improvised material is employed, a bridge guard under an engineer officer will be detailed for its care and maintenance during the period of its use. All orders, regulations, and instructions issued by this engineer officer relative to the care, protection, and use of the bridge will be considered as emanating from the commander of the force crossing the bridge.

When roads lead through swamps or quicksand, or across streams with treacherous bottoms, their limits are marked with stakes or bushes, or warnings are placed at dangerous points. At night lanterns are hung from the stakes, and a fire is built or a lantern hung to mark the landing.

When the current is strong and the water deep, foot troops cross on as broad a front as possible, the men marching abreast and holding hands. They should not look at the water, but at the opposite shore. If the ford is wide enough, mounted troops may cross at the same time on the upstream side, thus breaking the force of the current.

Fords that are at all difficult delay long columns unless the troops cross at several places at once. The crossing of many animals or wagons may deepen a ford and render it impassable; new places may thus become necessary.

Persons operating the ferry are interfered with as little as possible.

The men enter pontons or barges singly at the bow or stern, and gradually move toward stern or bow; larger vessels may be entered in column of twos; the men retain the places assigned them so as not to interfere with handling of boat; in small boats when water is rough they sit down; when there is danger they are directed to remove their equipments.

Horses are loaded one at a time. When there is room for a single row only they alternate heads and tails; if in two rows they face inward. If a horse falls into the water it is turned loose.

Guns, caissons, and wagons are generally loaded by hand; if practicable, the teams are sent on the same vessel.

Unloading is also from the bow, in good order, without crowding; men sitting down do not rise before their turn.

When rafts are used, special precautions are necessary. The center of the raft is first occupied and then the load uniformly distributed. Unloading is carried out in inverse order, the center of the load being last to leave.

The crossing of beef cattle on boats or rafts is dangerous. When practicable they are crossed by swimming.

104. Care of Troops.—On the march, commanders of the larger units keep themselves informed of the condition of their commands and of the progress of subordinate units in rear.

Sources of water supply are examined by experts and marked good or bad. In countries infected with cholera or other harmful bacteria, this is imperative.

Precaution is taken to prevent excess in eating and drinking. The drinking of water is often a matter of habit; under ordinary conditions a canteen of water should last one man a day's march. Soldiers should be trained to be economical in the use of water, and to keep a small supply until their canteens can be replenished. If water is plentiful they may drink often, but only a small quantity at a time.

Commanders afford the men ample opportunity for replenishing their canteens, but it is done by order, not by straggling from the command In certain cases, the advance guard may require the inhabitants to place water in vessels along the line of march for the convenient use of troops On long marches through country deficient in water, or where the water is bad, it may be necessary to carry a supply in wagons.

The watering of cavalry horses upon the march depends largely on the facilities available In hot weather, or if nothing is known about the water supply of the day's march, the horses are watered before leaving camp Good opportunities for watering on the road should not be neglected To avoid delay, as many troops as possible are watered at the same time; as the head of a command approaches a place suitable for watering, the several units are conducted, according to their position in column, to the different watering places.

Animals of the artillery and of wagon trains are watered while in camp—before departure and after arrival—or during a long halt. If time permits, they may be watered on the march from buckets, or by unhitching and riding or leading to water

One of the greatest sources of hardship on a march, especially for infantry, is hot weather Every precaution is taken to prevent suffering from this cause. Halting places are selected when practicable where there is shade and free circulation of air, and the men are cautioned against drinking too much water Green leaves or a moist handkerchief in the hat afford relief from the hot rays of the sun. If the men are overheated, care is taken to prevent them being chilled by exposure to cold winds or drafts.

105. Straggling.—No man leaves the ranks without permission; it is the duty of all officers and noncommissioned officers to prevent straggling. Enlisted men found away from their organizations without authority are arrested by the military police. Military prisoners held by military police are returned to their units at the first opportunity, with a statement of the circumstances of their apprehension.

All persons found pillaging, marauding, or committing crimes are arrested and dealt with according to law

106. Camp of Bivouac.—As a command approaches the camping place the commander issues the halt order. This order provides for the outpost, if necessary, and gives instruction for the encampment of the command.

SPECIAL REGULATIONS.

107. Though of general application, the foregoing rules must be modified according to the situation.

For convenience of reference and discussion, marches are classified as follows:

1. Marches in peace:
   (1) Marches in changing station.
   (2) Practice marches.
2. Marches in campaign:
   (1) Concentration marches.
   (2) Marches in the presence of the enemy.
   (3) Forced marches.
   (4) Night marches.

Marches in peace.

108. Changing Station.—The march order is issued from day to day, or it may cover marches of several days. It prescribes the distribution of troops, time of starting, camping places, service calls, and such other details as the commander deems necessary.

To afford greater freedom of movement, the distances between the elements of a column may be materially increased.

In wet weather, to avoid cutting up the road in advance, mounted troops of small mixed commands may follow the infantry; in going through high vegetation or snow, they may lead to break the way.

Field trains may follow immediately in rear of their regiments, and the supply trains be placed to facilitate issues.

109. Practice Marches.—The practical training of troops is divided into two phases, namely, garrison training and field training. Practice marches form a part of field training and are made with two objects in view (1) That of hardening the men and animals and of keeping them in proper physical condition; (2) that of instructing officers and men in duties incident to a campaign—marching, camping, cooking, etc.—and the principles of tactics, including the services of information and security.

A practice march conforms to the conditions it is intended to simulate

That the maximum benefit may be obtained, practice marches should always include instruction in field duties of some character In maneuvers, and in exercises where the presence of the enemy is assumed. regular field orders are issued

Marches in campaign

110. Concentration—Marches of concentration are made for the purpose of assembling at a certain time and place bodies of troops from different localities Such marches require an accurate computation of the time required for marching and of the road space occupied by the troops The condition of the roads, weather, etc., must be considered

A column of troops on the march should not be cut by another If the heads of two columns meet at a distance from the enemy, the senior commander has the right of way; if near the enemy, the senior determines what measures are to be taken.

If a column in march overtakes another at a halt, it may pass on, provided its commander be the senior, or the other commander gives his consent.

111. Marches in the Presence of the Enemy.—The order of march of these bodies is controlled by tactical considerations.

The order of march of the main body is determined by the contemplated employment of the troops. When contact with the enemy is probable, columns are closed up and march on broad fronts; communication is maintained between the columns on parallel roads, and all impedimenta not necessary in the conflict are kept in rear If a part of a unit of infantry is assigned to the advance guard, the remainder of that unit usually marches at the head of the main body

During the advance, the artillery, in order to expedite its entry into action, is generally near the head of the main body, sufficient infantry leading to insure proper security. Its commander usually accompanies the commander of the column. If there is danger to the flanks from small bodies of the enemy, the artillery may be broken into columns not longer than a regiment; it then marches like a convoy with infantry in front, in or opposite the center, and at the rear. This formation of necessity delays the entry into action of a part of the infantry; to reduce this delay, the artillery marches, if possible, in double column, and its combat train follows immediately in rear of the last infantry unit. When moving into action the artillery has the right of way.

Thus, in the march of a division, assuming the advance guard to consist of one brigade of infantry, all of the divisional cavalry, one battalion of artillery, one company of engineers, a detachment of signal troops, and a detachment of the santitary train, the distribution of the main body and trains might be made as follows:

1 regiment infantry.
1 battalion artillery.
Regiment artillery.
2 brigades infantry (less 1 regiment.)
Engineers.
Signal troops.
Artillery combat trains.
Trains.

On marches through long defiles, or dense forests, or on night marches, it may be advisable to place the artillery near the rear of the column.

112. Trains.—Military trains are at all times provided with the necessary guards. Field trains are guarded as far as practicable by men on duty with the train, by convalescents and other noneffectives, by dismounted men of the cavalry and by men from the battery reserves in the artillery. Supply, ammunition, and engineer trains are guarded by the military police. In marches into action the trains are held far enough in rear not to interfere with the movements of troops or to check withdrawal in case of defeat.

If a ponton battalion is attached to a division and is to be used during the day's march, it is assigned a place in column as far forward as practicable.

If a wagon breaks down or is stalled, its load is transferred to other wagons and the road cleared as soon as practicable.

113. Forced Marches.—The conduct of forced marches is controlled by the distance to be covered and the time in which the march is to be accomplished. As they seriously impair the fighting power of even the best troops, forced marches are undertaken only in cases of necessity. Long forced marches can not be made without injury unless the command is in good condition and the march is made with good judgment. The difficulties of the problem rapidly increase with the size of the command and length of the march, but in any case the completion of the march should find the troops in condition to accomplish the object of the march.

With foot troops forced marches are generally made by increasing the number of marching hours, the halts and periods for cooking and sleep being arranged so as to afford the maximum benefit. The rules prescribed for the average march are followed as closely as possible. For large columns of infantry, marching long distances, increase of pace is seldom of value.

A maximum day's march for infantry and trains is about 28 to 30 miles. A march of this character can not, as a rule, be prolonged more than 36 hours. If a forced march is to continue for several days, it becomes practically a succession of daily marches of more than average length.

Foot troops are favored in every way possible. They are assigned the best roads, and not intermingled with vehicles or mounted men. If transportation is available, their packs are lightened.

With mounted troops the gait, as well as the number of marching hours, may be increased.

Under favorable conditions of road and weather a rate of 50 miles in 24 hours can be maintained for three or four days. On such marches the usual hourly halts are made; in addition, a halt of 2 hours is made at the end of the first half of each day's march, during which the horses are unsaddled and permitted to roll, feed, and lie down. The rate is about 5 miles an hour, excluding halts.

Under very favorable conditions a single march of 100 miles can be made in from 24 to 30 hours. On such a march the usual hourly halts are made; in addition halts of 2 hours are made at the end of the first and second thirds of the march, during which the horses are unsaddled and permitted to roll, feed, and lie down. The rate is about 5½ miles an hour, excluding halts.

For distances from 30 to 40 miles a rate of 6 miles an hour, excluding halts, can be maintained under favorable conditions of road and weather. If the command be small, well seasoned, and lightly equipped, the rate may be even greater. The usual halts are made.

If the distance to be covered by forced marches is about 150 miles, the march begins at a rate of not more than 50 miles a day. For distances greater than 200 miles the daily march is from 30 to 40 miles.

On forced marches where the road is level or nearly so and the footing good, the men are occasionally required to dismount and march for short distances at a fast walk or slow double time, leading their horses. They are also permitted to loosen or remove their sweaters and overcoats, if their comfort will be materially increased thereby.

114. Night Marches.—Night marches are sometimes made in hot weather; generally, however, they are made as the result of a forced march to surprise the enemy or to secure a favorable position from which he may be attacked at night or at dawn.

Moonlight and good roads are favorable for night marches. A waning moon is of advantage in marches beginning early in the morning. As all-night marches rapidly impair the efficiency of a command, a few hours' rest should be taken if practicable. Special effort is necessary to maintain good march discipline.

Precaution is taken that the proper road is followed and that contact between units is maintained, men being stationed to mark changes of direction. If necessary guides are secured and charged with the duty of following the right road. When, due to unfavorable conditions, units can not be kept well closed, men will be placed at forks and crossings of roads, especially on dark nights and at times of dense fogs or storms, and always when passing through cities or towns from which roads diverge in many directions.

When the march is secret, additional precautions are necessary. Silence is maintained; mouthpieces of bugles are removed, and articles of equipment secured to prevent rattling; smoking is not permitted; villages and farmhouses are avoided on account of warning given by dogs. If the troops are compelled to leave the roads, their progress will be slow, and additional time allowance must be made.

If cavalry forms a part of the column at night, it ordinarily marches in rear of the infantry; if there is artillery, it generally follows the cavalry and has a special infantry escort.

CONVOYS.

115. On land the term "convoy" is usually applied to those trains by which supplies are forwarded to an army from depots or magazines in rear, and to trains bringing in supplies collected by requisition. The trains directly attached to a military force are generally sufficiently protected by the presence of troops and by train guards.

116. Wagon Convoys.—As the difficulty of controlling and protecting a convoy increases rapidly with its length, it should not, as a rule, contain more than 100 wagons. Such a train occupies about 1 mile of road space

An officer, with such assistants as may be available, is placed in charge of the transportation. He divides the train into sections of 20 to 30 wagons and places a noncommissioned officer or wagon master in charge of each section.

Military police are assigned to preserve order, protect property, render assistance in case of accidents, and take part in the defense. With hired or impressed transportation a strong guard is required

117 A convoy marches with a distance of about 25 yards between sections, about 2 yards between wagons, and at a rate of 2 to 2½ miles an hour, including halts. The march is similar to that of a body of troops, except for breathing spells in ascending long slopes and delays to lock wheels on steep descents. Long halts are avoided. The slowest teams are placed in the lead.

Broken wagons are removed from the road, their loads being transferred to spare wagons or distributed among other wagons of the train.

118. Security.—Security for a convoy is furnished by the escort, which, as a rule, is composed of infantry, with enough cavalry for scouting and communication, and some engineers. The proportion of cavalry varies, being greater in open than in close country.

The strength of the escort depends upon the importance and size of the train, the risk, nature of the country, length of the journey, etc A train containing explosives requires a strong escort in order to keep the enemy from firing into it.

The senior line officer on duty with the troops commands the convoy He consults with the officer in charge of the transportation, and, if practicable, defers to the latter's wishes as to the hours of starting, length of marches, parking of the train, military police, etc. Officers casually with a convoy exercise no authority therein

Distribution of Troops.—When a convoy is to march, the commander assigns military police to the different sections, and distributes the remainder of the escort as follows:

Advance guard.
Main body.
Flank guard (if necessary).
Rear guard.

Advance guard.—The advance cavalry, if any, precedes the train 3 to 5 miles, scouting to the front and flanks. It is accompanied by the necessary guides and interpreters. Careful examination is made of bridges and defiles and of the country in the vicinity; temporary guards are left at such points until the support comes up.

The remainder of the advance guard marches about a mile in front of the train.

The advance guard commander examines the country with a view to selecting suitable places for halting or parking the convoy, should the enemy be encountered.

The head of the train is never permitted to enter a defile until the advance guard is in possession of the farther end.

Main body.—The main body marches at the most important point, which may be near the head, in rear, or opposite the center of the train, the latter being the usual position. If the main body marches opposite the center it is generally advisable to place a section of infantry at the head and another at the tail of the train for its immediate protection.

Rear guard.—The rear guard marches a short distance in rear of the train, with the usual rear guard formation. Its strength is ordinarily about one-sixth of the escort.

119. Camping.—The place for camping is usually selected by the advance guard commander, due regard being paid to the water supply, fuel, grass, and facilities for defense. A field inclosed by wire fence is advantageous.

Herding should not be undertaken unless there is little danger from attack, or lack of forage demands it.

On going into camp or during long halts, the train is parked, the formation depending upon the proximity and character of the enemy and the amount of ground available.

When the enemy is known to be distant the train is usually parked in column of sections or half sections, with distances of about 20 yards between subdivisions, and intervals of 6 to 8 yards between wagons. A compact formation is secured by placing the wagons axle to axle and tying the animals to picket lines in front of the wagons.

For purposes of defense wagons may be placed in two lines facing each other, or in the form of a square, rectangle, oval or circle, the poles inside; the inclosure thus formed furnishes shelter for the men and animals. When there is time, wire entanglements are constructed and shelter trenches dug outside the corral.

A diamond-shaped corral is recommended for emergencies, as it can be rapidly formed and the march quickly resumed. The animals of the first two sections are unhitched and placed inside; openings are left where necessary. If the nature of the ground permits, the teams of the first two sections may countermarch before forming the corral, thus obviating the necessity of unhitching.

The camp is protected by the necessary outposts.

Defense of a Convoy.—The chief duty of the escort is to keep the enemy from gaining a position permitting effective fire on the train. With efficient security a convoy can not be surprised

The flanks of a convoy are its most vulnerable parts. If the enemy is reported near, the wagons are closed up and the march is continued in the most orderly manner possible; if practicable, the wagons are formed in double column.

The escort fights only when necessary, and does not pursue when the enemy is repulsed. If the enemy holds a commanding position or a defile on the line of march, he is either dislodged by the escort or the convoy takes another road.

The advance cavalry reports the presence of the enemy with the utmost dispatch so that the commander may change the direction of march, park the train, or, if necessary, begin a retreat.

If menaced by small parties of the enemy, a convoy continues its march under protection of the escort; if attacked by a superior force, the train is parked or a corral formed, skirmishers being thrown out to delay the enemy and gain time for the formation The commander selects good defensive positions at some distance from the train, intrenches if possible, and prepares for a stubborn resistance. Couriers are dispatched to apprise the nearest troops of the situation. Should the enemy be repulsed, his retreat is carefully verified before the march is resumed.

If it is evident that the train can not be saved, the commander endeavors to escape with the most valuable part, the remainder being set on fire or otherwise destroyed.

Attack of a Convoy.—The most favorable time for attacking a convoy is when it is passing through woods, a defile, or over a bridge; when it is going around a sharp bend in the road; when ascending or descending difficult slopes or passing over bad sections of the road; when the convoy is beginning to form a corral; when the teams are being watered; or, generally, whenever the conditions are such that the escort can not quickly prepare for defense.

The attacking force endeavors to bring the convoy to a halt, and to throw it into confusion by making an attack from an unexpected quarter. The fire of artillery and of machine guns is very effective. If a convoy is captured, the parts that can not be carried off are destroyed.

CONDUCTING PRISONERS.

120. In addition to an escort to repel attempts at rescue, a guard of about 10 foot soldiers and several mounted men is required for every 100 prisoners. The captives are formed into companies and marched in column, their officers marching separately. Prisoners are treated kindly, but must be given to understand that any attempt to escape will draw fire. If the convoy is attacked, they are ordered to lie down. At night they are placed in suitable well-lighted buildings or inclosures.

CONVOYS BY WATER

121. On interior waterways, water transportation derives its security principally from the presence of troops in the field. For protection against guerrillas and raiding parties, a shallow-draft steamboat, provided with machine guns and shelter against rifle fire, carries part of the escort and precedes the transports. Means for rapidly disembarking the escort are provided in order that hostile parties on shore may be quickly dislodged. In the case of narrow streams or canals lined with woods or other cover, it may be necessary to have the escort march on both banks and clear the country as it advances.

At sea, on the Great Lakes, and on large rivers, inlets, and estuaries, convoy escort duty is performed by the navy in accordance with the following rules prepared by the joint board:

"1. All matters relating to the purchase, charter, fitting out, equipping, and maintenance of transports, engaging their officers and crews, and providing rules for their government, their interior discipline and administration, shall be controlled by the army.

"2. If practicable, all transports carrying troops or animals shall be supplied with distilling apparatus adequate for the supply of water required. As a reserve in case of emergency, a distilling ship, furnished by the navy, shall, if practicable, accompany each convoy.

"3. *a*. All matters relating to the loading of the transports with troops, animals, or stores, and the quota or cargo to be assigned each vessel, will be under the charge of the army

"*b*. The discharge of troops, animals, and stores from the transports into the boats and their transfer in boats to the shore will be in charge of the navy, and will be carried out at such time and in such order as the army commander may decide.

"4. *a*. An expedition oversea which requires naval convoy being decided upon, as soon as the transports begin to assemble at the rendezvous a naval officer of suitable rank shall be appointed as convoy commander and be supplied with information concerning the strength of the expedition and its proposed objective.

"*b*. The army authorities shall furnish him with facilities for inspecting the transports as they assemble, for the purpose of ascertaining whether they are properly fitted with ground tackle, boats, lines, and all equipment necessary for the proper management and control of the convoy while in transit and while disembarking men and animals under the conditions which will probably be met. Defects in this direction shall be by him called to the attention of the proper army authority, who shall use every effort to remedy such defects, in accordance with the judgment of the naval convoy commander The naval convoy commander shall render all possible assistance with the resources at his disposal. In the event that it is found impracticable to remedy defects which, in the opinion of the naval convoy commander, will threaten the safety of the convoy or jeopardize the success of the expedition, such defects shall be reported immediately to their respective departments by the army and navy convoy commanders.

"5. A naval lieutenant and a junior or warrant officer and four quartermasters or signalmen for each transport and supply vessel under convoy shall be supplied by the Navy Department and shall be detailed by the naval convoy commander to the vessels when they are ready to proceed to the anchorage determined upon as the final rendezvous for departure Means of making flag, hand semaphore, and wigwag signals by day and night shall also be provided by the Navy Department.

"6. *a*. The orders as to the destination of convoy and time of sailing shall be issued by the army commanding officer under the authority of the War Department and communicated to the naval convoy commander Should circumstances arise after sailing which render a change in plan or destination necessary or desirable, which change it is not practicable to refer to higher authority, the army commander shall, after consultation with the naval convoy commander, decide as to such change.

"*b*. The naval convoy commander shall have control of all movements of the convoy and shall establish all orders of sailing and formation. He shall make provision for emergencies, such as an attack by an enemy or dispersion of the convoy by weather or other circumstances.

"*c.* He will make his subordinates, placed on the transports and supply vessels, familiar with his dispositions and plans.

"*d.* Should the transports be separated from the convoying vessels by accident or design, the senior naval officer present and on duty will take charge of the convoy and control its movements in accordance with the plans of the convoy commander.

"7. *a.* The senior naval officer attached to a transport or supply vessel shall, under the authority of the naval convoy commander and in obedience to his orders and signals, control entirely the movements of the vessel in which he is embarked, including her anchorage.

"*b.* He shall have no other authority on board. The master and officers of the vessel shall perform their navigation duties affecting her speed and movement under his direction, and should there be any opposition to or interference with his authority in any way he shall call upon the commanding officer of troops on board, who shall take such steps with the force under his command as may be necessary to enforce the authority of the naval officer attached to the vessel.

"8. The time, place, and order of landing will be decided upon by the army officer commanding, who will consult with the naval convoy commander as to naval assistance, such as the covering and protection of the landing by the artillery of the men-of-war and use of naval boats. This assistance the naval convoy commander will render to the utmost extent practicable and with the sole object in view of assisting to the utmost the plan of campaign of the army commanding officer. After the order of landing is made known to him, the naval convoy commander, in accordance therewith, will control the placing of the transports and supply vessels for disembarking the troops, animals, munitions, and stores, and will control the loading and unloading of boats and have control over such area of the beach as may be necessary for the proper execution of the above. The naval convoy commander will also control the withdrawal of transports, when discharged, to the harbor and anchorage selected. In case of reembarkation under naval convoy the same general procedure will govern.

"9. It is deemed desirable that the army commanding officer, if convenient, shall be embarked in the flagship of the naval convoy commander. If not convenient, the army commanding officer's transport should be out of the formation and near the flagship of the naval convoy commander, in order that communication between them may be readily had at any time, and in this case the senior naval officer assigned to transports should be embarked in the same transport as the army commanding officer.

"10. Any existing regulations or orders in conflict or at variance with any of the foregoing rules are rescinded or modified to the extent of such conflict or variance."

Article V.

COMBAT.

122. Combat is divided into two general classes, the offensive and the defensive. The defensive is divided into the purely passive defense and the temporary defense, which has for its object the assumption of the offensive at the first favorable opportunity.

Decisive results are obtained only by the offensive. Aggressiveness wins battles. The purely passive defense is adopted only when the mission can be fully accomplished by this method of warfare. In all other cases, if a force be obliged by uncontrollable circumstances to adopt the defensive, it must be considered as a temporary expedient, and a change to the offensive with all or part of the forces will be made as soon as conditions warrant such change.

COMBAT PRINCIPLES.

The following principles apply to both offensive and defensive combat:

Fire superiority insures success.

Unity of command is essential to success. The regiment united in combat has greater force and fighting power than have three separate battalions. A battalion acting as a unit is stronger than are four companies acting independently. All the troops assigned to the execution of a distinct tactical task must be placed under one command.

The task assigned any unit must not involve a complicated maneuver. Simple and direct plans and methods are productive of the best results in warfare.

All the troops that are necessary to execute a definite task must be assigned to it from the beginning. Avoid putting troops into action in driblets.

Detachments during combat are justifiable only when the execution of the tasks assigned them contributes directly to success in the main battle or when they keep a force of the enemy larger than themselves out of the main battle. When combat is imminent all troops must be called to the probable field of battle. A force is never so strong that it can needlessly dispense with the support of any of its parts during combat.

Too many troops must not, however, be committed to the action in the early stages, no matter what be the nature of the deployment or the extent of line held. Some reserves must be kept in hand.

Use the reserve only when needed or when a favorable opportunity for its use presents itself. Keep some reserve as long as practicable, but every man that can be used to advantage must participate in the decisive stage of the combat.

Flanks must be protected either by reserves, fortifications, or the terrain.

Flank protection is the duty of the commanders of all flank units down to the lowest, whether specifically enjoined in orders or not. This applies to units on both sides of gaps that may exist in the combat lines.

Reconnaissance continues throughout the action.

USE OF THE COMBINED ARMS.

123. Infantry.—The infantry is the principal and most important arm, which is charged with the main work on the field of battle and decides the final issue of combat. The rôle of the infantry, whether offensive or defensive, is the rôle of the entire force, and the utilization of that arm gives the entire battle its character The success of the infantry is essential to the success of the combined arms.

124. Artillery.—The artillery is the close supporting arm of the infantry and its duties are inseparably connected with those of the infantry Its targets are those units of the enemy which, from the infantry point of view, are most dangerous to its infantry or that hinder infantry success. The greater the difficulties of the infantry the more powerful must be the artillery support.

In order to insure close cooperation of the artillery with the infantry in combat, the leader of each infantry unit to which artillery support has been assigned will, in both the attack and defense, make known to the artillery commander his plans and their expected development and will, throughout the action, keep the artillery representative accompanying him fully informed of the needs of the infantry in the matter of artillery support.

The security of the artillery in combat must be provided for either by the distribution of the other arms or specifically in orders. But when such is not the case the necessary protection must be afforded by the nearest unit of infantry or cavalry whose mission will permit it to give such protection.

125. Cavalry.—The cavalry, preceding contact of the opposing troops of the other arms, is engaged in reconnaissance of the enemy and of the terrain and in accomplishing such mission as may be assigned it. During combat it directs its activities to the support of the other arms and particularly toward insuring the success of the infantry as soon as that arm is fully committed to action. It must not be given a task, nor voluntarily assume one, that will prevent its fullest cooperation with the other arms in the decisive action. The cavalry leader will be given wide initiative in the tactical employment of his command during the decisive combat.

The cavalry of a field army is divided into two classes, that attached to the infantry divisions and called divisional cavalry, and that forming a separate strategical unit called the cavalry division.

The divisional cavalry is an auxiliary arm of the infantry division and is used as the division commander directs, either as independent cavalry or as advance cavalry.

The cavalry division is pushed, as independent cavalry, far to the front, often several days' march in advance of the remainder of the field army, to drive back the covering forces of the enemy and to gain accurate information of his dispositions, strength, and movements. This is the most valuable use of the cavalry division in the opening stages of a campaign. The use of the cavalry division as a screen is justified only in exceptional cases, as it is seldom effective in absolutely preventing hostile reconnaissance. Better results can be obtained by using the cavalry as a mass to engage and defeat the enemy's cavalry. The troop leading of the cavalry division is prescribed in the drill regulations for that arm.

A field army commander may find it necessary to strengthen the independent cavalry of the field army by the temporary assignment to it of all or part of the divisional cavalry.

An army commander may combine two or more cavalry divisions under one leader.

126. Special Troops.—The engineer troops, when not engaged in the special duties of their arm, may be used as infantry, but only in exceptional cases, as part of the attacking line. On the offensive, when used as infantry they form part of the reserve, part of a holding force, or are used for flank protection. On the defensive, they may be used as infantry wherever the development of the action warrants such use.

The duties of all other special troops or units that form part of the division are laid down in the different tactical manuals.

127. **Heavy Field Artillery.**—The limited mobility of heavy field artillery renders its use inadvisable in any position from which the conditions of combat may require its hasty withdrawal. For that reason it has no place in an advance guard; in an outpost, unless occupying a position in which the action is to be fought to a decision; in advanced positions or posts; in the rencontre; or in delaying actions, unless its loss is justifiable.

128. On the offensive, heavy field artillery finds its function in firing upon supporting points in the hostile line; upon covered positions occupied by large bodies of the enemy, particularly his reserves; in the destruction of material objects, as buildings, bridges, etc.; and, in general, against a position that has been deliberately taken up and strengthened by the enemy.

129. On the defensive, heavy field artillery finds its use in compelling the deployment of the enemy's columns at long distances from the defensive line, against any large formed bodies of the enemy, and against those parts of his matériel or material objects within his lines that offer an important target.

Due to its long range, it is profitably used in both offensive and defensive combat in restricting the field of activity of the enemy's shorter range artillery. It can also be used to advantage in the destruction of the enemy's field artillery matériel.

130. The use of the heavier types of field artillery presupposes an offensive, where reconnaissance of the enemy's position has been thorough and where the attack has been carefully planned; or a defensive, where there has been time to deliberately select and strengthen a position. Until the use of the heavier field artillery under the conditions given can be clearly foreseen, its position is well to the rear of all the combatant units.

FIRE SUPERIORITY

131. Fire superiority must be obtained in the early stages of combat and maintained to the end. Without it, success can not be expected either on the offensive or the defensive. It affords the best protection that can be given troops advancing to the attack, as also the best means of diminishing losses. The artillery must cooperate with the infantry in obtaining and maintaining fire superiority. Deficiency in the volume of fire on the defensive should be offset by the selection of a position naturally strong, or that can be made strong, in the time available for that purpose.

FRONTAGE OF UNITS IN COMBAT.

132. Depth in formation for combat, rather than extension of front, is all important in the initial deployment, even where the position and the strength of the enemy have been fully developed. Sufficient depth makes available means to meet the contingencies of combat and the unforeseen developments in the situation as they arise. Troops once deployed and committed to action are no longer available to enable the leader to exercise a constant influence over the course of the entire combat. The progress of the combat will call for an extension of the front occupied in the initial deployment that can not be foreseen Troops must be held available for the purpose of such extension. For that reason some reserves must be held to the last, but when the decisive moment arises every man that can be used to advantage must be put into the action.

Frontages for deployment are based upon the infantry strength of the division and higher units. Artillery has no place in the front line of the initial deployment and, at the time such deployment is made, the place of the cavalry is out in front of the line or in contact with the enemy on the flanks. The infantry strength alone, therefore, is considered in fixing the frontages for the initial deployment.

The frontages occupied by the different battle units are not in proportion to the number of their component units. The duration of the combat and the needs for the security of the flanks increase with the size of the force employed. Each higher leader must keep out a reserve. A division, therefore, makes its initial deployment or a front only twice that justified for the brigade, and a field army of three divisions, when one division is held as a reserve, is assigned for deployment a front twice that of the division.

A unit whose flanks are secured by other troops or by impassable obstacles, or one that occupies a position naturally strong, or made so by adequate preparation, may be given a frontage limited only by the requirements of fire efficiency throughout the combat. The same is true of reserves deployed to bring about a decision already prepared by other troops. A force whose flanks are exposed must protect them by a maximum distribution in depth.

Frontages of units in forces no larger than a brigade are prescribed in the drill regulations for the different arms, and the principles upon which the frontages given are based apply when such units are part of a larger force than a brigade.

Divisions and Field Armies.—A division, when operating against an enemy of nearly equal training and morale, and on open and unprepared ground, can not make its initial deployment on a front greater than 1½ to 2 miles and, at the same time, have the capacity to hold its position strongly throughout the action. In the same way a field army of three divisions would be limited in its initial deployment to the frontage of 4 to 5 miles. Where, for uncontrollable reasons, deployment over a more extended front is necessary, strong reserves are the only means available to meet the dangers incident to such overextension.

INTRENCHMENTS. (See page 180.

133. On the defensive the artificial strengthening of the position taken up is limited only by the time and the facilities available. On the offensive intrenchments are used on all lines that are to be held for any length of time. Troops advancing to the attack must understand that the best protection against losses is afforded by an uninterrupted and vigorous advance toward the enemy's position, and by the use of such natural cover as the ground offers. In the attack intrenchments will be used only when further advance is for some time impossible, and to hold ground already gained.

USE OF MACHINE GUNS.

134. Machine guns are emergency weapons. They are best used when their fire is in the nature of a surprise to the enemy at the crises of combat. Their effective use will be for short periods of time—at most but a few minutes—until silenced by the enemy. When engaged they must be used to the limit of their effective capacity. On the offensive they find their use in assisting the attack to obtain fire superiority temporarily lost and against lines of trenches which are to be assaulted. In the defensive they are used against large targets visible for a short time only, and on advancing lines of the enemy's infantry within the close and effective ranges. The effect of enemy's gunfire, particularly his artillery fire, on machine guns, is lessened by their employment in small groups.

POST OF THE LEADER.

135. On the march when there is a probability of contact with the enemy, the leader of each column is at the front, usually well forward with the advance guard. During action, in forces no larger than a brigade, the leader places himself far enough to the front to personally direct the movements of his command. In divisions, it will, at times, be possible to find a point of observation from which the division commander can personally supervise the course of the action or, at least, overlook the most important part of the field assigned to his division. In forces not larger than a division, the post of the leader during combat is usually near the position of the reserve. In forces larger than the division, and in the division where the terrain does not permit of personal observation, it is best for the leader, during the action, to be well in rear, removed as far as possible from the sights and sounds of the battlefield, in order that his decisions may not be unduly influenced by local conditions. In this case communication with all parts of the battlefield must be direct, rapid, and continuous.

RESERVES.

136. The preponderating influence of rifle fire in deciding an action seems to call for the deployment in the early stages of all the troops that can be used on the firing line. But rifle fire, even with the maximum possible support of artillery fire, will not alone force a favorable decision. Infantry, properly trained and properly led, can not be driven from position by fire action alone. For that purpose an assault actually delivered, or one that shows a determination to close with the enemy, is necessary. The firing line prepares the way for this assault, but is not in itself sufficient for its completion. Fresh troops must be at hand to give the firing line the impetus necessary to drive it forward, and fresh troops must be at hand to actually penetrate the enemy's position, to fill in gaps that develop in the line, to cover the reorganization of troops disorganized in the assault, and to meet counter attacks. On the defensive, troops must be at hand to meet the play of the opponent who holds the initiative. In both offensive and defensive combat, flanks that are vulnerable must be secured. For all such purposes some troops must be kept out of the firing line until the very last stages of the action. Reserves are thus a necessity and they must be strong enough to answer the demands made upon them during the entire combat.

The reserve is the leader's weapon, which, on the offensive, enables him to shape the course of the action and to finally force a decision. On the defensive, it enables him to meet the developments of the action as they arise. Adequate reserves must be held for the crises of combat, but all troops will find a field for activity before or at the close of the battle

137. The knowledge of the situation that the leader possesses must guide him in fixing the strength of the reserves. On the offensive one-fourth to one-third of the entire force is held out at first as a reserve in all units down to and including the regiment. In the passive defense, after the requirements of the firing line are fully provided for, the governing consideration in fixing the strength of the reserve is the vulnerability of the flanks Where the flanks are secured by other means, a reserve as low as one-eighth of the entire force may suffice In the defense seeking an opportunity to attack, the change from the defensive to the offensive, together with the requirements of flank protection, requires strong reserves Here it may be necessary to hold out at first, for this purpose, as much as two-thirds of the entire force

In an attack involving forces of the size of a division, or larger, the brigade reserves protect the flanks of the attacking lines, support such lines if they be repulsed, meet counter attacks, secure the captured position, thus giving the disordered attacking lines time to reform, and initiate the pursuit of the retreating enemy In the brigade on the outer flank of an enveloping movement the reserve may be used at the last to extend the line In the defense, the brigade reserve is used to protect the flanks of its firing lines, to support such lines is driven back, to make local counter attacks, and to cover the retreat of its firing lines, if the latter be compelled to withdraw from action

138. In Divisions.—In divisions, the division reserve is used to meet enveloping or turning movements; to make an enveloping movement where the situation of the division permits; to fill in gaps that may develop between its own divisions and others on its flanks during the course of the action, and to make counter attacks A decisive engagement will call for the use of all or nearly all of the reserves before a decision is reached, but if any part of the reserve remains in hand when a retreat becomes necessary, it will be used to cover the withdrawal from action and reformation of the deployed lines.

139 In Field Armies.—In field armies the general reserve may be smaller proportionally than in the division acting alone. Its function is not to reinforce divisions in action, or to be used piecemeal in any part of the field It finds its best use as a mass of maneuver to envelop or turn the enemy's position, to meet similar moves on his part, or to change the character of the action, as from defensive to offensive.

140. Artillery.—Artillery that can find active employment anywhere in an action is out of place as a reserve. When the unit of which it forms a part is held as a reserve, it remains a component part of such reserve unless detached for active use in some part of the field under the orders or directions of the superior leader

CAVALRY.—The value of cavalry as a reserve lies mainly in its mobility The cavalry division gives the leader of the field army a valuable and powerful weapon with which to meet any crises in combat which demand the employment of troops possessing the highest mobility. But to rely wholly upon cavalry for a reserve is to restrict the sphere of activity of that arm Reserves other than those composed of cavalry must be provided for

PLAN OF ACTION.

141. Upon the information of the enemy and of the terrain obtained by reconnaissance and, as far as time will permit, upon the study of the terrain in the field of probable operations made by the leader, the plan of action is based. After contact is gained the decision will be to attack, to take up a defensive position, to withdraw, or to change the direction of march. The offensive must be the rule, to be departed from only for uncontrollable reasons.

The following factors must be considered in arriving at the decision: The mission, relative numerical strength of the opposing force, relative efficiency of the troops on both sides, the terrain, and the probable results of victory or defeat. In doubtful cases aggressiveness and initiative will usually win. To take up a defensive position, to withraw, or to change the direction of march so as to avoid contact with the enemy may be a conservative or prudent course to follow in doubtful cases, but such a course will not bring victory nor shorten the campaign. The mission of an army in war is to win battles. Every step taken must be with that end in view.

COMBAT ORDERS. (See Article III and Appendix 3.)

142. The initial combat orders of the division and of all units higher than the division are almost invariably written. Troops may be put in motion in the desired direction, especially in a rencontre engagement, by verbal orders, but such verbal orders must be followed as soon as possible by written orders. After the action has begun the greater number of the orders given by the higher commanders will be fragmentary and verbal. In units higher than the regiment all such orders will, as far as practicable, be written out by a staff officer at the time they are issued, and a copy thereof be given the officer charged with the execution of the order, if possible at the time the order is delivered, otherwise as soon thereafter as it is possible to furnish it.

Troops deployed and under fire can change front only at the risk of incurring heavy losses When they are once committed to any line of action, change to another is costly both in men and morale It is impossible for the higher troop leaders to directly influence the course of an action once begun in any way except through the use of such reserves as may be at hand. Modern fire effect will not permit the higher leaders to change abruptly the course of action of troops already engaged by the mere sending of orders, verbal or written, to the commanders of such troops. These principles must be borne in mind in issuing combat orders.

Combat orders are the expression of a fixed decision and must definitely state the end in view, such as "To attack," or "To take up and defend" a position Vague or ambiguous orders indicate vacillation and the absence of any definite decision on the part of the officer responsible for them Troops have a right to be told, in terms that are direct and unmistakable, exactly what it is their leader wants them to do.

143. Armies.—In armies, combat orders will often be in the form of, or a part of, letters of instruction to the commanding generals of the field armies composing the army. But where the field armies are within supporting distance of each other and can mutually cooperate in the task assigned them, formal combat orders may be issued. Such orders are necessarily general in their character and consist of a statement of the objective sought by the army commander, and of the part he expects each field army to play in attaining this objective. The army commander, either by means of letters of instruction or by personal conferences with his field army commanders, fully acquaints them not only with the immediate end in view, but also with so much of his further plans as may be necessary to insure thorough cooperation on their parts.

144. Field Armies.—In field armies, combat orders recite the decision of the commanding general and assign the tasks that each division is to perform in carrying out such decision Details as to the movements of any part of a division, including the trains, have no proper place in combat orders of field armies.

145. Divisions.—In divisions, or in forces smaller than a division but made up of two or more arms, the combat orders will recite the purpose of the commanding general, which is either the expression of his own decision, or is the task allotted him by the higher commander, and will then state definitely the task that each subordinate unit is to perform in the execution of this purpose. The order states definitely what each subordinate unit is to do. How the task allotted is to be performed is the function of the commanders of the subordinate units.

146. Personal conferences between the higher commanders and the subordinates who are to execute their orders may at times be advisable, in order that the latter may arrive at a correct understanding of the plans and intentions of their superiors and may correctly interpret the orders issued. But such conferences are not for the purpose of criticizing the orders or plans of the higher commander, nor to influence the latter's action. The officer issuing the order can not share the responsibility therefor with any of his subordinates. The decision, no matter how arrived at, is his alone.

147. In assigning combat tasks, divisions in field armies and brigades in divisions are given certain well-defined parts of the enemy's line to attack, or certain sections of a line to defend, or are held as general reserves. In divisions, the special troops are assigned tasks in orders only where such tasks are not definitely prescribed in the manuals for the employment of such troops in combat. Combat orders of divisions fix the position of ammunition distributing stations, dressing stations, and stations for the slightly wounded. If no previous arrangements have been made for the disposition of the trains, the combat order provides for grouping all trains not needed on the battle field far enough to the rear so as not to interfere with the movements of the combatant troops, should withdrawal become necessary.

148. Combat orders need not necessarily provide for the protection of flanks or maintenance of communication, nor for the keeping up of local reconnaissance, unless some special disposition is desired. Such matters are attended to by the commanders of all units involved, as a matter of course. If an omission in these respects is to be feared on the part of a subordinate, attention may be directed to them in orders, provided such subordinate can not be replaced by an officer more fitted to command.

149. Commanders of subordinate units cannot plead absence of orders or the nonreceipt of orders as an excuse for inactivity in a situation where action on their part is desirable, or where a change in the situation upon which the orders issued were based renders such orders impracticable or impossible of execution. If the subordinate commander knows what the general plan—the end in view—is, lack of initiative on his part is inexcusable.

DEVELOPMENT AND DEPLOYMENT FOR ACTION

150. In armies, the objectives assigned to each field army are necessarily of a general character and are determined some time, often several days, preceding probable combat. The objective determines the route of march for the field army and the manner in which such march is conducted. The object is to place the field armies in preparatory positions from which development for action can be best accomplished and the divisions moved most expeditiously to their allotted tasks.

151. In the theater of possible operations, forces larger than a division will march in more than one column unless the only routes available are such as would place the different columns outside of supporting distance of each other. Divisions are within supporting distance of each other when not more than a day's practicable march apart, and when the intervals between the heads of the different columns are such as will not permit the enemy to interpose his force between them. In field armies the intervals between the divisions in march must be such as will permit simultaneous development and deployment for action, without crowding the troops or unduly extending the line

152. When an encounter with the enemy is probable, every available means will be taken to gain information and to lessen beforehand the time that will be required in the deployment for action. Single route columns of such length that the rear elements are out of supporting distance of those in the lead, must be shortened by an extension of front, as far as security and the terrain will permit. This extension is secured by breaking the single column into two or more parallel columns, rather than by an extension of the front of such units, as for instance, marching in columns of platoons or sections—a difficult and fatiguing method of march As the enemy draws nearer and combat becomes imminent, these columns are again broken up into smaller parallel columns, until the final development is such as to insure rapid deployment and still retain sufficient depth in formation to enable the leader to meet the after requirements of the situation.

153. Precautions must be taken, in this development for action, that each column is directed upon its probable objective, and that the different columns and parts of columns do not get out of supporting distance of each other. This development for action takes place in divisions and smaller units before the route column comes within the zone of hostile artillery fire.

154. Combats of armies or of field armies are made up of a number of local combats conducted by divisions or parts of divisions. In divisions, each brigade is given a definite objective or is held in reserve. After the combat is on, the division commander can retain but little direct control over the troops actually engaged. His control over the course of the entire action must rest in his use of the artillery and of the reserves he has at hand. The artillery is the only arm that can immediately respond to demands for support made by troops already engaged. The division commander uses this arm to meet local crises in the battle that must be met at once. The reserves are so placed and maneuvered as to meet the demands of the larger crises of the action.

155. In field armies, after the divisions are moving upon their objectives, the field army commander does not interfere in the leading of such divisions except as may be necessary to influence the entire action. His best weapon for this purpose is the general reserve.

156. After the initial deployment of the division for action the subsequent troop leading of the brigades, and of the units smaller than the brigade, follows the principles laid down in the drill regulations of the different arms.

157. With the entry into action of the infantry, the cavalry withdraws from the front. From that time on the position of the cavalry should be one of readiness for use in the crises of the combat. If inferior to the enemy's cavalry, it may be forced to conform to the movements of the latter. In such a case it will have little or no voice in the selection of the position toward which it falls back.

158. In armies the cavalry divisions will usually remain under the orders of their own field army commanders.

159. In field armies and in divisions, the selection of the flank toward which their cavalry will fall back when obliged to uncover the front is the function of the commanders of those units. The flank selected is the one most exposed, and where the active support of the cavalry may be most necessary to the infantry, or, if that factor can not be determined, the flank that affords the best field of activity for the cavalry in assisting in the main combat or in operating against the enemy's flanks or rear. Throughout the entire action contact must be maintained with the hostile cavalry, and the latter prevented from hindering the success of the infantry. To best effect this purpose the cavalry of field armies and divisions must be kept concentrated on one flank. Such a division of the cavalry in an endeavor to cover both flanks as would seriously impair its fighting capacity, is but rarely justifiable.

THE SURPRISE.

160. To be surprised is never justifiable in warfare. If, however, due to insufficient reconnaissance, troops are forced into action directly from a formation unsuitable for combat or come unexpectedly under effective fire of the enemy before development and deployment, boldness in decision and in action is usually the best line of conduct. If the enemy is still beyond close range, quick development of fire is important. Here the artillery must be put into action at once, to deliver a heavy fire upon the most threatening bodies of the enemy. If the enemy is so near that a charge is practicable, recourse to the bayonet must be unhesitating. This principle applies particularly well where troops suddenly encounter the enemy in the local phases of a battle. To attempt to retire at once when surprised is to risk annihilation.

When troops are on the march or at rest, reconnaissance by the cavalry, the omission of which is never justifiable, is the best means to guard against being surprised. In action cavalry reconnaissance is the best protection against surprise on the flanks or from the rear.

THE RENCONTRE.

161. In the rencontre, where there is no surprise, success depends mainly upon efficient troop leading. To well-trained and well-led troops the attack in the rencontre is natural, and presents fewer difficulties than under any other condition of warfare. Quick decision on the part of the leader is possible, if he has thought out beforehand and keeps constantly in mind what he will do when the enemy is encountered. On the march he must take care to change the details of his mental plan to fit the changing conditions of terrain. This principle applies to all leaders, from the superior commander down to the commander of the advance party on the march or of the outguards when in camp.

162. In rencontre combat there are but two courses open to the commander of the advance guard, viz, to attack, or to hold his position. The action of the advance guard will usually shape, and in every instance decidedly influence, that of the entire force. It must, therefore, be such as will accord with the preconceived plans and intentions of the supreme commander. The advance-guard commander must know in advance whether the general plan is aggressive or defensive, and what the ideas of his superior are as to the development of such plan. This is the only guide to action the advance-guard commander can have, but it will ordinarily suffice to determine him whether to act boldly or cautiously. The terrain of the rencontre may be the deciding factor in his decision, but, except for uncontrollable reasons, no action of the enemy should rob him of the initiative, or force him from the decision he believes to be in accord with the plans of the supreme commander.

Boldness on the part of the advance-guard commander or the prompt action of the enemy may cause an intial deployment that the development of the action shows to be faulty or on wrong lines. In such a case the action of the advance guard must, perforce, be of a holding or delaying character, in order to give time for the correct deployment of the main body. Until this deployment is accomplished the advance guard must hold its position. It may then be withdrawn and form the reserve.

The advanced detachments must endeavor to forestall the enemy in deployment and not only cover the advance into action of the artillery, but also disclose targets for its fire. Strong firing lines and the use of machine guns are the most important factors in successfully accomplishing this task. Important supporting points must be seized and held. This brings the enemy to a standstill, and gives the superior leader the opportunity to seize the initiative and to deploy the remainder of his troops for action, uninfluenced by the first dispositions of the enemy.

In the rencontre the early use of the artillery delays the deployment of the hostile lines or forces such deployment at long ranges and thus gains valuable time for the leader to shape his plans.

OFFENSIVE COMBAT.

The attack.

163. In combat, where the force involved is as large as or larger than a division, a simultaneous effective advance against the entire hostile front is out of the question. Modern battles are made up of a number of local combats, where success or failure in any one instance may decide the issue of the entire battle. Fronts occupied by field armies are but seldom continuous, even in comparatively flat and open country. Some parts of the line will be held much more strongly than others, and the natural defensive features of portions of the front may render part of the line naturally impregnable.

It is necessary, therefore, to select in the enemy's position limited sections, against which the decisive attacks will be made; but to insure success, the attention of the enemy must be held along his entire front. The attack thus develops into two parts; one whose task it is to actually assault the hostile position at selected points, if assault be necessary to drive the enemy out; the other whose task it is to threaten or to actually attack all other parts of the enemy's line, in order to hold the hostile troops to their position and to prevent the strengthening of the points to be assaulted.

164. As fire superiority is the first and most important requisite to success, it must be obtained at the start and maintained throughout the action. Fire superiority depends mainly upon the volume of the fire. A frontal attack alone against the hostile position may give no opportunity to obtain a greater volume of fire than that of the enemy, unless the latter's lines be unduly extended. Where that condition exists, a combination of a frontal with a flank attack promises the best results. The enemy is attacked in front by part of the force, while the remainder is directed against one of his flanks with a view to enveloping it. A successful envelopment of both flanks of the enemy, simultaneously with the frontal attack, is made possible only by a decided numerical superiority on the part of the attack. An attempt to envelop or to attack both hostile flanks, without an attack in front, entails a dispersion of force so rarely justifiable as to deserve no consideration.

165. In armies and in large field armies only the direct attack is practicable as a whole. But in the local combats of the smaller units into which the entire action is divided envelopment is usually practicable.

166. The terms "frontal" and "enveloping" attacks have no significance so far as the ultimate relative positions of the contending forces are concerned. Unless the enemy blunders or is decidedly numerically inferior, the enveloping attack finally becomes a frontal attack, so far as the brigade and smaller units involved are concerned. It must be expected, therefore, that all attacks, no matter how initiated, will ultimately be made in a direction normal to the position of the troops opposing them.

167. Preconcerted plans covering all phases of an attack are objectionable, since it is impossible to determine, until the development of the action makes it manifest, what part or parts of the enemy's line will prove the most attractive for the assault. Both frontal and enveloping attacks will be equally energetic at first, and when the time comes for the decisive attack, the part of the attacking line designated for that purpose is given, by means of the supports or reserves, the added momentum and strength that may be found necessary to a successful assault, while the remainder of the force holds the enemy in its front to his positions.

168. Selection of Enemy's Flank to Envelop or Turn.—In the selection of the flank of the enemy against which to direct the enveloping or the turning movement, the governing considerations are both tactical and strategical. Tactical considerations point to the selection of that flank of the enemy which is weakest in position or in troops, gives ease in approach, affords cover to the enveloping or the turning movement, and where the defeat of the enemy will prove most disastrous to him. Strategical considerations direct the attack toward that flank of the enemy where, if successful, it will drive him away from his line of retreat and cut him off from his nearest supporting troops or the possibility of reinforcement. The possibility of defeat and the resultant position of the attacking troops must also be considered Where tactical and strategical considerations conflict, tactical considerations must govern The gaining of the decision in combat is of primary importance.

The enveloping attack.

169 The advantages of envelopment lie mainly in the longer concentric line employed, which gives a greater volume of fire, or a fire that is converging upon the enemy's position, and which may enfilade part of the enemy's line when he is compelled to form a new front or to refuse a flank of the old to meet the enveloping attack.

170. While surprise is, to a great extent, essential to the success of an enveloping attack, it can not be hoped that the enemy will so neglect the duty of reconnaissance as not to be aware of the movement in time to form a new line to meet it. The time that he has for this purpose must be reduced to a minimum by the use of cover for the enveloping force, as far as the terrain makes it possible, and by keeping at a distance the reconnoitering force of the enemy What the enemy may be kept from knowing, if the holding and enveloping attacks be properly conducted, especially as regards coordination of time and effort, is against which part of his line the decisive attack will be finally made.

In the enveloping attack, since the enemy moves on shorter lines, he can readily extend his flank beyond that of the attack up to the limit of his strength. An attempt to meet such movement is apt to lead to overextension of troops, or to a dangerous separation of the enveloping from the holding attack. It is usually better to take advantage of the enemy's overextension and thinning of his lines by retaining a deep formation and protecting the outward flank by reserves, than to overextend in turn in an effort to outflank him.

Turning movement.

171. In forces larger than a division turning movements may be used in conjunction with a frontal or a frontal and enveloping attack. As a turning movement separates the entire force into two parts, each for a time outside of the immediate supporting distance of the other, both the holding and the turning force should be made up of all arms, and each force should be strong enough to maintain itself in position without calling upon the other for support. The turning movement is justifiable only when it can be made in such a manner as to permit of dividing the entire force, without giving the enemy a favorable opportunity to defeat the separated parts in detail.

The holding attack.

172. This, as the name implies, is for the purpose of holding the enemy to his position by offensive action in one part of the field while a decisive blow in the nature of an assault or of an enveloping or a turning movement is struck in another quarter. The governing idea of the holding attack is to make it energetic enough to deceive the enemy, in order that he may use as many of his troops as possible in resisting it, even drawing upon his reserves for such purpose. Early development of the maximum volume of rifle and artillery fire is therefore essential, and for that reason the deployment is on extended lines. Supports and reserves are reduced to the minimum that will be needed to replace losses, secure the flanks, and strengthen those parts of the line against which the enemy might act most aggressively. Holding attacks differ from delaying actions in that the guiding principle in the former is offense and in the latter defense. The holding force may be called upon to push the attack to the point of an assault, and in the end will join in the advance on the enemy's position when the decisive attack has succeeded. Care must be taken that the holding attack does not, because of promising conditions in its front, make a premature assault on the enemy's line and be defeated before the decisive blow can be struck in another part of the field. There is danger, also, in prematurely pushing this attack so far that its weakness or its intentions may be disclosed to the enemy and give him the opportunity to defeat the entire force in detail.

The assault.

173. If the hostile lines are held by good infantry, properly led, and supported by good artillery, fire action alone will not bring about a decision. For this purpose the assault will be necessary.

174. In large forces assaults are local and not general. Combined assaults in forces larger than a division are not practicable, nor can the assaults of several divisions along an extended front be coordinated in time. Each battle unit to which has been assigned a distinctive mission must time its assault according to conditions in its own part of the field, but other units must keep the enemy in their front so occupied that he can not concentrate a heavy force to meet the assault or to make a counter attack.

175. While the plan of the superior leader under which the first deployment for action takes place may have in view, in a general way, an assault of certain portions of the hostile lines in the attack of an enemy in position, or the forcing back of a portion of the enemy's line in the rencontre, the point of the assault can not be definitely fixed until the attack is well developed. For that reason the different parts into which the attack is divided must be so handled and the reserves must be so placed, that any portion of the line may be pushed to the assault when the proper time comes.

176. Selection of Objective.—When the time for the assault arrives, all the firing lines will have advanced far enough toward the enemy to disclose the weak and the strong points of his lines. The selection of the objective of the assault and the time for launching it rest preferably with the superior leader in that part of the field, but conditions may arise which justify subordinate commanders in moving to the assault, or the impulse for the assault may emanate from the troops engaged and not be the result of orders. In the absence of orders, subordinate commanders are not justified in pushing to the assault, no matter how promising conditions in their front may be, if there are not reserves available in their part of the field to insure success, or if success would interfere with the general plan.

177. While the superior leader in the local combat may be so far to the rear of the firing line that it is difficult for him to perceive when the proper time to make the assault has come, he alone is in position to give it the proper direction and to clinch success by use of the reserves and by coordination of the action of the remaining troops to that of the assaulting lines. Where the assault is made by orders of subordinate commanders, or where the impulse for it emanates from a part of the firing line, there is danger that other parts of the line will have neither the power nor the inclination to move forward in support. Assaults by small bodies of troops can succeed only where conditions of terrain are such as to afford them cover and protect their flanks. Otherwise, if they are not supported by other parts of the line, the result may be the annihilation of the assaulting force. The higher commanders must keep closely in touch with the varying phases of the fire fight, and be ready to give the necessary impulse by means of the reserves or other parts of the line, when they see that the enemy's firing power is broken and there is an inclination on the part of the firing line to close with the enemy. But if they believe the time is not ripe for the assault, they must not be forced into it by the premature action of part of the line. Rather than support a premature minor assault, it is best to let such assault expend itself, even to annihilation.

178. Support by Fire.—As soon as the decision to assault is made, all the fire that can be brought to bear by artillery, machine guns, fire of position, and from other parts of the firing line will be directed upon that part of the enemy's lines selected for assault. The artillery must support this assault to the end, regardless of the losses it may sustain, and must continue its fire up to the moment of the charge, even at the risk of some of its projectiles striking among its own infantry.

The pursuit.

179. Importance.—Only by means of an energetic pursuit of the beaten enemy can the full fruits of victory and decisive results therefrom be obtained. It is not the mere defeat of the enemy's army, but its destruction, that ends the campaign. The task of the victorious army is less than half performed when it remains satisfied with the mere possession of the battle field. Pursuit must immediately follow victory, and every effort be made to continue contact with the enemy, day and night, up to the absolute limit of physical endurance of the troops.

180. Initiation.—When the enemy continues the engagement until actually driven from his position by the attack, pursuit is locally initiated by regiments and battalions, whose firing lines occupy the enemy's trenches and fire on his retreating troops. Supports and reserves still in hand are held, as far as required, to meet any counter attack that the enemy may make. As the retreating enemy gets beyond the range of fire from the occupied position and the danger of a counter attack seems removed, any local reserves that remain in hand are designated by the commanders of the units to which they belong to follow the enemy in their own section of the battle field. But the need of re-forming the attacking units and of replenishing ammunition, together with the mental and physical condition of the troops that made the attack, as well as the insufficient strength of the forces immediately available, soon brings this local pursuit to an end. In order that the enemy may not be able to take advantage of this opportunity to shake himself free from his opponent, a systematic and orderly pursuit must take up the task where the local pursuit left off. The superior leader must promptly issue orders that will insure this pursuit. Where the defeat of the enemy has been decisive, pursuit by all the forces in battle formation will be the most effective in the beginning. Where, however, the attack has been of such a nature as to greatly weaken all or a part of the troops directly engaged, it is best to give such troops an opprotunity to assemble and reorganize. In such a case pursuit is inaugurated by all the reserves that may remain in hand. The other troops, when re-formed and reorganized, follow as a reserve.

181. When the enemy commences his withdrawal before his front lines have given way, troops committed to the attack continue in their allotted task until the enemy in their front is driven from his position, when they pass to immediate pursuit in battle formation In the meantime, all the cavalry and horse artillery, available are thrown against the flank or in front of the retreating troops, and whatever general reserves of infantry and artillery are still intact are moved against the flank or rear of the hostile holding force or at once take up the direct pursuit.

182. Conduct.—No matter under what circumstances the pursuit is inaugurated, the principles under which it is conducted thereafter are the same. The task is to keep continuous contact with the enemy and to seek every opportunity to inflict losses upon him. Boldness to the point of rashness is not only justified but is demanded in the pursuit. The assumption of a dangerous offensive on the part of a retreating enemy unless he be reinforced is not to be feared so long as he is given no opportunity to free himself of his opponent.

183. Cavalry and Artillery.—The cavalry takes up the pursuit of a beaten or retreating enemy at once, without waiting for specific orders to do so. Only such mounted troops as may be necessary to keep contact with the enemy will pursue directly on the road or roads over which he is retreating. The bulk of the available mounted troops, cavalry and horse artillery, will endeavor to get on the flanks or in front of the retreating enemy, in order to bring him to a standstill, or to at least delay his retreat. The task of this force is essentially independent of that of the other troops. It must endeavor to anticipate the enemy, in the possession of defiles, bridges, or other points of vantage that lie on the latter's line of retreat. Its mission is to further disorganize the enemy and, where unable in itself to break down the opposition of his larger formed bodies, to hold them to a position until the infantry and the field artillery can again come up with them. All remaining available artillery will be pushed as far in advance in the pursuit as the infantry support will permit.

BROAD FRONT.—Where the terrain permits, pursuit on a broad front is productive of the best results, as it facilitates the envelopment or turning of any position taken up by the retreating troops. If the enemy takes up a position to hold part of the pursuing line, the continued advance of the other parts will give opportunities to cut off the delaying forces of the enemy, or will compel his early withdrawal from the position taken. Where there are several pursuing columns one will thus open the way for the others. In pursuing on a broad front care must be taken that the different parts of the pursuit do not get out of supporting distance of one another.

DEFENSIVE COMBAT.

The passive defense.

184. A force may at times fully accomplish its mission by retaining its position for a specified time with or without combat. Here the object is to avoid giving the enemy the decision, either by avoiding combat altogether or, if he attacks, by preventing him from carrying the position held by the defensive troops. The position taken up is selected, as far as the mission will permit, with reference to its natural defensive features. Since the idea of offensive combat is absent, every advantage is taken of obstacles, natural or artificial, that hinder or altogether prevent the advance of the enemy. Negative rather than positive measures are relied upon to prevent the enemy from seizing the position. In this form of defense the firing line is made as strong as possible from the first. If the flanks are not secured by other means, reserves strong enough for that purpose must be provided, but no reserves need be held for a decisive counter attack. Supports and local reserves need be only strong enough to replace losses, to strengthen or reenforce the firing line where the enemy's attack is most threatening, and to repair breaches in the line.

185. The purely passive defense is justified where the sole object is to gain time, or to hold certain positions pending the issue of events in other parts of the field. Its results, when it accomplishes its mission, can never be other than negative.

The defense seeking a favorable decision.

186. This is the only form of the defense that can secure positive results. A force whose intentions are offensive may at times be forced to assume the defensive either voluntarily in order to gain time or to secure some advantage over the enemy, or involuntarily, as where, in the rencontre, the enemy gets a start in deployment for action, or where the enemy's attack is impetuous and without sufficient preparation. In either case the defensive force contents itself with parrying the blows of the enemy, while gathering its strength and looking for the opening to strike a decisive blow

187. The crisis of this form of the defensive comes with the counter attack, which marks the change from the defensive to the offensive. Upon the superior leader falls the responsibility of perceiving the right moment at which this change should be made and of having at hand the means necessary to effect it. The general reserve affords him the weapon necessary for his purpose. In this class of the defensive, therefore, strong supports and reserves are essential. The firing line is made as short as possible at first, in order to permit of the holding out of local supports and reserves strong enough to meet all movements of the enemy and to hold the line thoughout up to the time of the decisive counter attack, and the retention until that time of a reserve strong enough to make the counter attack a success. An open field of fire for effective and close ranges is essential. Obstacles immediately in front of the position that might impede the counter attack are objectionable.

The counter attack.

188. The part of the enemy's line at which the counter attack will be launched can not be determined definitely until the time comes to make it. The enemy's attack will usually disclose weakness in some parts of his lines, and supports and local reserves may be used to accentuate this weakness or even to develop it in that part of the enemy's line where the terrain or the position of the general reserve may give the best opportunities for the counter attack.

The counter attack may become necessary where the enemy shows the greatest strength, in order to keep him from penetrating the defensive position. The decision as to the time and the place for making the counter attack rests with the superior leader. All, or the greater part, of the general reserve is used to effect this change from the defensive to the offensive. Local counter attacks by small units are a means of defense and will often be necessary and advisable, but have no direct bearing on the main counter attack, which is controlled by the superior leader. Local counter attacks must not, therefore, be pushed to the extent of committing other than local supports or reserves to the offensive before, in the opinion of the superior leader, the time has come to strike the decisive blow.

189. The counter attack may be made by launching the reserve against the enemy's flank after he is fully committed to the attack, or straight to the front where weakness in his attacking lines is apparent. The impulse for the counter attack may at times be given by the advance of the fighting line after a repulse of the enemy and the consequent demoralization of his attacking lines.

190. When the time comes for the counter attack, all the artillery and machine-gun fire available is suddenly turned on that part of the enemy's line selected for the attack. This must not be done until the troops are ready for the attack. Otherwise, the enemy may discern the intention in time to make preparations to meet it either by reenforcing that part of his line or by pushing the assault in another part of the field.

Cavalry in defensive combat.

191. In all defensive combat cavalry has even a more important rôle than it holds in the offensive. It must always be ready to come immediately to the assistance of the infantry and to make any sacrifice necessary to ward off the defeat of that arm. It must be kept near at hand and ready for action, mounted or dismounted, in any part of the field. Its opportunities for mounted action to check the enemy's advancing lines, especially those that threaten the flanks of the infantry, will probably be many. Its cooperation can not be limited to any part of the battle. It may be able to hasten by its action the time for the counter attack or to create the opportunity for such attack. The superior leader must be in immediate communication with the cavalry commander throughout the action, and the work of the cavalry must be so coordinated with that of the general reserves that each will be prepared to seize any opportunity created by the other. The general reserve and the cavalry, together with all the artillery not fully occupied elsewhere, are the means available to the superior leader to change from the defensive to the offensive and to make such change successfully.

Defensive positions.

192. A defensive position may be taken up and strengthened when the direction of the enemy's advance is definitely fixed, and when it will be necessary for him to carry such position in order to keep the force occupying it from accomplishing its mission. Until such condition is fulfilled the time has not come to take up a defensive position.

193. Requisites.—The requisites to be sought in a defensive position are a clear field of fire up to the effective range of the artillery, flanks that are naturally secure or that can be made so by the use of the reserves, extent of ground suitable to the strength of the force to occupy it, effective cover and concealment for the troops, especially reserves, good communications throughout the position, and good lines of retreat. Unless the defense is to be a purely passive one, obstacles in front of the position must not be such as would impede the counter attack.

194. Division and Occupation.—The front of the position is divided into sections and to each is assigned a unit which provides its own section reserve The subunits provide their own supports. The entire position is prepared for defense, as far as time will permit. The governing consideration in the selection and the strengthening of the position is the needs of the infantry Suitable artillery positions are selected and prepared, but are not occupied until the plans of the enemy are developed In the meantime the artillery is held in readiness. Artillery firing positions must be such as will bring fire to bear at long range on attacking lines approaching from any possible direction. The artillery will serve the needs of the defense best when it can bring an effective fire to bear on the assaulting lines of the enemy and can sweep the front of the entire position.

195. Position of General Reserve—The position of the general reserve is such as will enable it to respond best to the most probable demands to be made upon it If the line is such that the enemy may attempt a decisive attack along any part of it, the reserve will be held in a central position Dividing the general reserve and holding it in two or more positions widely apart are inadvisable, except where necessary to insure the reenforcement of any part of the line in time to be effective

196. Advanced Positions and Posts.—The occupation by a strong force of any position in advance of the main position is objectionable, in that it involves a dispersion of strength on the part of the defense and may result in compelling the entire force to fight to a decision in the advanced position and not in the position prepared for that purpose Where necessary to occupy advanced positions in order to secure more time before the enemy can attack the main position, or in order to keep the enemy out of them as long as possible, care must be taken that the force detailed for the purpose is not so weak that it will fall back to the main position before it accomplishes its mission, and not so strong that it will be tempted to hold out too long, with the resultant danger of committing the remaining troops to action in advance of the main position It is not a question of how strong a force can be spared for the purpose of occupying an advanced position, but rather how weak can this force be made and yet have strength sufficient to accomplish its mission.

The holding of strong posts in advance of the main position, either for the purpose of delaying the enemy or for observation, is not objectionable due to the fact that the force necessary for the purpose is restricted in strength. Unlike advanced positions held in force, advanced posts may be occupied up to the last so long as any advantage is gained thereby, even to the extent of risking the total loss of the occupying detachment.

197. **Supporting Points.**—Even on comparatively level and open ground it is rarely necessary or advisable to occupy or strengthen the defensive line to the same degree throughout its entire extent. The terrain will generally offer some points in the line that are unusually strong naturally, or that can be readily strengthened, and such points will be used as supports on which to rest the entire line. They should be selected with a view to afford each other mutual support, flanking the ground over which the enemy must attack, and compelling him to capture one or more of them before he can force a decision. Supporting points are especially desirable on the flanks of the position and where there are unavoidable salients in the line. They must form a part, and not be in advance, of the main position.

Positions in readiness.

198. Where it is intended to resist the advance of the enemy in the immediate vicinity, and knowledge of his movements is not yet sufficiently definite to decide upon a plan of action, troops may be placed in a position in readiness for action. A position in readiness may be preliminary to taking the offensive against the enemy or, as is more often the case, to taking up and occupying a defensive position. In the former case no defensive position need be selected or prepared The troops are developed for action in such a way as will hasten their deployment when the time comes. In the latter case defensive positions will be tentatively selected covering all the probable lines of approach of the enemy, but none of the positions so selected will be occupied or strengthened until a definite selection can be made. However, if there be a line or supporting point that is common to all the tentative positions and which must be held, no matter what may be the direction of the enemy's advance, it will be occupied at once and strengthened. The infantry necessary for its garrison will be assigned to it without delay.

199. The remainder of the infantry will be held near its most probable position in the ultimate defensive line. The artillery

will be placed in readiness to command all, or at least the most probable, lines of approach of the enemy and where it can be readily moved into firing positions when required. Continued and thorough reconnaissance is most essential, and all the cavalry available will be used for that purpose, supported by other arms where such support is necessary to obtain the desired information.

200. Requisites.—The requisites of a position in readiness are good means of communication to the probable positions to be occupied, or to the front where the intention is to assume the offensive, and such cover as will prevent the enemy from readily reconnoitering the position and dispositions of the troops.

Withdrawal from action.

201. No other situation in combat demands so high an order of skill in troop leading as does withdrawal from action under pressure of the enemy's attack. A leader is not justified in withdrawing from the field of battle as long as he has reserves in hand whose active use might turn apparent defeat into victory To hold out reserves for the sole purpose of covering a possible retreat is never justifiable as long as defeat is not a certainty. But when defeat is certain the last reserves in hand should be used to cover the withdrawal from action of the firing lines. Where all the troops have been committed to the action, and withdrawal under pressure of the enemy's attack is unavoidable, unless troops can be gotten together to cover the withdrawal of the lines that are the hardest pressed the retreat quickly degenerates into disorderly flight. It will seldom be the case that there are not some local supports or reserves still intact somewhere along the line, or that some portions of the firing line can not be withdrawn without serious difficulty or risk. In the absence of reserves such troops are sent to occupy a position to cover the withdrawal. Cavalry and horse artillery may be used unsparingly to take the place of the infantry withdrawn, and to hold the advance of the enemy in that part of the field until the covering positions are occupied. All available artillery is used to stop the advance of the enemy.

202. Order of Withdrawal.—In the withdrawal from action it is desirable to withdraw first the troops that can be most readily disengaged from the enemy. But the terrain may dictate the withdrawal first of the troops that are the hardest pressed, in order to prevent them from being cut off or forced away from the line of retreat.

Covering positions.

203. Selection of good positions to cover the withdrawal is the most important requisite in retreat. The first covering position taken up should be far enough to the rear to prevent the troops occupying it from being directly influenced by the withdrawal from the main position, and yet near enough to such position to exert at once an influence on the action when the withdrawal begins, and to cover the retirement of the advanced lines. Defeated lines will usually be forced by the enemy's attack to retreat straight to the rear, and the covering positions selected should be located preferably to the flanks of the lines of retreat. They must afford also facilities for ready withdrawal of the occupying force. If any reserves remain at hand, they occupy the selected position and immediately make dispositions to cover the withdrawal of the advanced lines. The maximum fire effect at the long and effective ranges is desirable, and this is gained by making the firing line as strong as possible. Supports and reserves for this line are reduced to a minimum. Machine guns so placed that they can open suddenly upon the lines of the enemy are a very effective means of stopping the pursuit. A clear field of fire at the close ranges is not necessary in a covering position. The position of the artillery may be still further to the rear, but always within effective range of the main position, in order to bring fire to bear upon the enemy's pursuing lines as soon as the withdrawal from the main position is under way.

204. Successive Covering Positions.—When retreat is decided upon it may be necessary to take up successively other covering positions farther to the rear before the advance of the enemy can be checked long enough to give the time necessary to properly organize the retreat, to bring the troops from the deployed battle formation into an orderly column of march, and to enable the rear guard to take up its duties in an effective manner. The principles governing the selection and the occupation of the first covering position apply to all the others. Their occupation is for the purpose of gaining time and putting as great a distance as possible between the main body of retreating troops and the pursuing enemy.

Assembly positions.

205. When compelled to withdraw, troops that have been actively engaged will usually be obliged to fall back for several miles in deployed formation, before efficient reorganization and assembly is possible. It is a mistake to attempt re-formation of the disorganized units too close to the position from which withdrawal is necessary. The assembly position must be far enough to the rear to enable the deployed lines to thoroughly free themselves from all contact with the enemy and to insure sufficient time for undisturbed reorganization. Reserves must continue to cover the withdrawal of the disorganized troops until the latter have reached a safe assembly position, where complete reorganization is possible. Leaders of the smaller units, however, collect and re-form such units as fast as possible on the march

206. As soon as the withdrawal is well under way, the superior leader goes to the rear to select the assembly position, if not already selected, and to make plans for the reorganization of his force and for its future dispositions.

The retreat.

207. A step-by-step opposition to the enemy's pursuit, by taking up and holding successively covering positions to the rear of the main position, can not be continued long without involving an excessive number of troops and increasing the demoralization of the entire force The number of covering positions taken up in the immediate vicinity of the battle field must be reduced to a minimum by organizing the retreat and forming a rear guard as soon as possible after the decision to retreat has been reached.

208. Preparation of Plan.—The leader will bear in mind during the course of the battle the possibility of retreat, and will form at least a mental plan as to how such retreat will be inaugurated and conducted, should it become necessary Such a plan may be considered even before combat, and the higher staff officers must be prepared to submit to the leader, when called upon, the parts of the order that concern their own departments. Lines of retreat will be selected that give the greatest strategical advantages and afford the shortest practicable routes to reenforcements or a safe position. The retreat must be on lines that lead to a concentration of the forces as soon as practicable. Measures must be thought out to keep the enemy from forcing the retreat over lines other than those selected. Covering positions are tentatively selected and the troops to occupy them are kept in mind during the shifting phases of the battle.

209. Assignment of Roads.—In forces larger than a division, all the roads practicable for the retreat will be used and, if possible, each division assigned a separate road. In such a case each division forms its own rear guard. Where more than one division is forced to use the same road, the rear division covers the retreat.

210. **Preliminary Measures.**—When the engagement has been decisive the orders for the retreat will necessarily be issued fragmentarily and in the form of successive instructions to the units involved. Under such conditions, only after the retreat is under way and the rear guard is effectively performing its duties can a combined order be issued The trains are at once put in march in the direction of the retreat and every effort made to keep them out of the way of the combatant troops. Those troops that have been but slightly engaged with the enemy and can be readily withdrawn may be assembled, after withdrawal from action, immediately back of the firing lines, if cover be available, and at once put in order of march or used to cover the withdrawal of other troops. The troops last to withdraw, usually those that have been most heavily engaged, may not be brought into order of march as a whole until they have fallen back to the position of assembly well to the rear.

211. **Rear Guard.**—The formation of an effective rear guard must be the first care of the leader The troops best adapted for a rear guard are those whose strength and morale have been least impaired in combat. All of the divisional cavalry, except reconnoitering detachments, and as much of the artillery as can be effectively used, are assigned to the rear guard. The strength of the infantry force assigned to the rear guard will usually be limited to that of the infantry immediately available, but will not exceed one-third of the entire force. The rear guard differs in composition from the advance guard in the greater proportion of artillery and cavalry. All troops doing rear-guard work should be placed under one command

212. **Conduct.**—The conduct of the rear guard must be governed by the consideration that the advance of the enemy must be delayed without becoming so involved in action that withdrawal is difficult or excessively costly. The rear guard that obliges all or any part of the main body to stop the retreat in order to come to its assistance, fails in its mission. The taking up of positions on a broad front on ground favorable to the use of long-range fire will oblige the enemy to make wide deployments that require much time to effect. This in itself accomplishes the mission of the rear guard. Negative measures, such as the destruction of bridges, the placing of obstructions in roads, defiles, etc., are used to the fullest extent. There

need be no hesitation on the part of the commander of the rear guard in the destruction of any material objects in the path of the enemy, since such objects will undoubtedly be destroyed later by the enemy, should he, in turn, be obliged to retreat.

213. As the enemy will pursue on a broad front with a view to cutting off the delaying force on some one route or of attacking the main body in flank, the rear guard must fall back on a broad front. Flank detachments will be necessary where the terrain gives to the enemy more than one route of pursuit. The different columns into which the rear guard may be divided must be always in a position to afford mutual support, and must endeavor to keep abreast of each other. Not every good position need be taken advantage of to delay the enemy, where delay is not essential to the safety of some part of the command. The march of the main body must be expedited as far as the maintenance of order and the retention of morale will permit. Only in that way can be avoided the necessity of calling upon the rear guard for undue exertion and heavy sacrifices. Points on the line of retreat, whose possession is essential to the safety of the command, such as bridges, defiles, etc., must be secured in advance of the enemy. Strong flank positions that command the lines of retreat will be occupied by detachments from the main body and held until the rear guard comes up. Detachments of the hostile cavalry that gain a position from which they may harass the flanks of the retreating columns must be kept at a distance by the use of infantry, as all the available cavalry will find its employment in contact with the leading troops of the pursuit.

214. In the retreat the cavalry and the artillery must be called upon to make the greatest exertions and to suffer the heaviest losses, where necessary, to check the pursuit. The loss of men, horses, and matériel must be unhesitatingly faced, if there be any decided gain thereby.

215. Divisions retreating over parallel roads will endeavor to mutually support each other, and to keep their columns abreast, as far as may be possible. The cavalry division will usually find its best employment against the enemy's cavalry, or, in the absence of the latter, against a flank of the enemy's pursuit.

Delaying actions.

216. Delaying actions are of two classes: One in which the advance of the enemy is delayed as long as is possible without imperilling the safe withdrawal of the delaying force; the other, in which this force must hold its position, regardless of the risks and losses involved, for a time that is dependent upon conditions in other parts of the field or in the theater of war.

217. In delaying actions of the first class mentioned, the firing line is made as strong as possible from the beginning. Supports and reserves are reduced to a minimum. A clear field of fire at the long and the effective ranges is most important, as the enemy must be brought under as heavy a fire as possible as soon as he comes within range. The terrain must be such as to give ease of withdrawal from the position. A clear field of fire at the close ranges is not necessary. As soon as the enemy comes within assaulting distance the position is vacated, machine guns and mounted troops delaying the advance of the enemy's lines up to the last minute that permits of safe withdrawal.

218. In delaying actions of the second class mentioned, where time must be gained even at the risk of sacrifice of the delaying force, development of effective fire at the long and effective ranges is an important element. But here the close ranges must also afford a good field of fire. Artillery and machine guns remain in action, even at the risk of total loss, as long as there is a target at which to fire.

219. Since in all delaying actions the governing idea is to gain as much time as possible before the enemy can come within assaulting distance, the position taken up must be such as will not afford cover to the attack up to the close or nearer effective ranges. Open ground to the front is desirable, in order that the enemy may be obliged to make an early and a wide deployment before advancing to the attack. A maximum extent of firing line is useful for this purpose. Supports and reserves are held well to the rear. Obstacles, natural or constructed, that impede the advance of the enemy are desirable. Defiles that can not be readily turned offer good opportunities for delaying action.

NIGHT COMBAT.

220. With the increase in range and accuracy of fire, particularly that of the artillery, and the facilities for observation that are afforded by the use of aero-craft, night operations increase in importance. Troops must often make use of darkness to minimize losses from fire and to escape observation, to prepare for an assault to be made at daybreak, or to approach a point from which a daylight assault is to be made. Night operations may be necessary also for purpose of gaining time.

The offensive.

231. Even with well-trained and easily led troops, a night attack involves risks that should be assumed only for the most weighty reasons, and when the results of success are such as will justify the action. With poor troops and inefficient leaders night attacks are out of the question. As control is difficult, artillery support of the assault impossible, and confusion almost inevitable, chance is a factor that must be given maximum weight in estimating the probabilities of success.

232. A night attack may appear advisable where it is found impossible to secure the fire superiority necessary to permit of an assault by day or where, for other reasons, it is found impracticable to push the attack to within assaulting distance of the enemy's position; to avoid the heavy losses that would be incurred in an attack over open ground against a well-prepared position; to capture an advanced post or position, or an outpost as a preliminary to further operations, or to surprise poorly trained and poorly led troops.

233. A night attack made simultaneously, along the entire front of a division or field army, is impracticable. A force as large as a brigade may be designated for the purpose of making a night attack against one definite objective in the enemy's line, but each regiment and each battalion therein must in turn be given an objective. If a night attack is to take place along a more extended front than that assigned to a brigade, it will be made up of a number of separate attacks, and the objective assigned to each brigade must be so separated from those assigned to others that the possibility of collision between the brigades during the attack is eliminated.

224. Night attacks will be made only by order or consent of the superior leader in that part of the field. The decision to attack must be made while there is yet sufficient daylight to make all the preliminary reconnaissances and necessary preparations. A thorough knowledge of the ground and of the enemy's position is necessary for the subordinate commanders. Any cooperation on the part of the troops other than those directly assigned to the task, that may appear advisable, is provided for by the superior leader.

The defensive.

225. On the defensive, obstacles in front of the position occupied and strong patrols pushed well forward afford the best protection against night attacks. When the approach of the enemy is evident, the trenches are heavily manned and the supports moved close up to the firing line. Fire is not opened until the enemy is close enough to offer a profitable target, otherwise the fire will be wild and ineffective. The principal reliance in repelling attack must be placed in the bayonet. Reserves, using the bayonet only, make counter-attacks when the opportunity to do so comes, especially against the flanks of the hostile attacking lines.

Night advance.

226. An advance may be made at night in order to gain ground toward the enemy's position, but without any intention of bringing on a decisive engagement with the enemy during darkness. Preliminary to such a movement patrols should be pushed toward the enemy beyond the position to be gained. If the position taken is within range of the hostile position, it must be occupied long enough before daylight to give time to strengthen it, unless it is occupied with the intention of pushing the attack at dawn.

BIVOUAC ON THE BATTLEFIELD.

227. In combats between armies and even between field armies or equivalent units, several days may elapse before a decision is reached. This condition entails a severe mental and physical strain upon the troops engaged, a strain which every effort must be made to lessen as far as the requirements of the task imposed will permit. The physical wants of the troops must be provided for and every opportunity for rest given them. But shelter and comfort of the troops must be subordinated to the requirements of instant readiness for action at all times.

228. When opposing forces are in contact, night will afford the advanced troops but little opportunity for sleep. The offensive will now, more than ever before, take advantage of night to push forward and entrench new lines or strengthen ground already gained. The defensive must avail itself of darkness to strengthen its position and repair faults in its lines. Night attacks by either side are always a possibility. Regular rest for the troops occupying the advanced lines is, therefore, out of the question, and to prevent exhaustion they must be permitted to rest at any time, day or night, when the exigencies of combat will permit.

229. It is usually impracticable, and generally inadvisable, to wholly relieve the firing lines at night by fresh troops unless a new position be taken up While all troops bivouac at night in position, the firing lines must maintain their tactical formations and a greater readiness for action than is necessary for the other troops. To give the troops on the firing lines as much rest as possible, patrols and sentry posts, composed of the freshest troops from the supports or local reserves, are pushed to the front to keep a constant watch on the enemy and upon the foreground. Sentry posts may be entrenched and given cover from fire from both front and rear, but in such a manner as not to interfere with observation to the front. Combat patrols must look to the safety of the flanks and of the rear, where protection to the rear is not otherwise provided for Artillery positions must be fully covered. Fires must not be lighted in any part of the position that is within range and observation of the enemy

230. The approach of dawn is often taken advantage of by the offensive to launch an energetic attack from a position gained during the night, and by the defensive to make a counter-attack and to drive back the opposing advanced lines All troops that are necessary to meet such moves on the part of the enemy must, therefore, be held fully in readiness at that time

MEASURES TO BE TAKEN AFTER THE BATTLE

231. When a favorable decision on the field of battle has been gained and the enemy is in retreat, the superior leader must first give his attention to the inauguration of a systematic and orderly pursuit. The replenishment of the ammunition supply must be his next care Other supplies necessary for the subsistence or the comfort of the troops are brought up Orders are issued providing for the police of the battlefield, in order to prevent pillage and maltreatment of the dead and wounded, and for a thorough search for the wounded of both sides. (See also par 349) Field hospitals immobilized for the care of the wounded will be evacuated as rapidly as the condition of the wounded and facilities for evacuation to the rear will permit. When the decision has been adverse and a retreat is necessary, all the severely wounded and the wounded whose transport might delay or impede the retreat will be left behind with the sanitary personnel and supplies necessary to their immediate needs.

Article VI.

SHELTER.

GENERAL PRINCIPLES.

232. To maintain the efficiency of a command, the troops must have adequate shelter.

In time of peace troops in the field are generally sheltered under canvas. In local insurrections, riot or disorder, public buildings in the disturbed district may be used for sheltering the troops engaged in quelling the disturbance, when other shelter is not provided. Private buildings are not entered without the owner's consent, except in the performance of duty.

In time of war temporary use may be made of public buildings in our own country when absolutely necessary—for example, in the care of the sick and wounded; but as long as communities or individuals offer the use of buildings, or they can be rented at reasonable rates, seizure is not resorted to unless the emergency is imperative. In enemy territory public and private buildings may be used to shelter troops and for other military purposes; but for sanitary reasons troops are seldom quartered in private buildings. When public or private buildings are to be taken for shelter, the civil authorities should be consulted and satisfactory arrangements made. Families are not removed from their dwellings if it can avoided.

233. When troops are sheltered under canvas, they are in camp When resting on the ground without shelter, they are in bivouac when occupying buildings in towns or villages, or huts specially erected, they are in cantonment.

Cantonments often develop through improvement of camps—huts or temporary buildings taking the place of tents. During a prolonged suspension of hostilities, the occupation of enemy territory, and at sieges, cantonments are advantageous, especially in cold or wet weather.

234. Billeting [1] is the assignment of troops to public or private buildings for quarters.

---

[1] No soldier shall, in time of peace, be quartered in any house without the consent of the owner; nor in time of war, but in a manner to be prescribed by law. (Constitution, 3d amendment.)

235. The allowance of tentage to be carried on the march is fixed in Tables of Organization. The allowances at other times is fixed by the various equipment manuals.

SHELTER IN THE SERVICE OF THE INTERIOR.

236. In mobilization and concentration camps, troops are sheltered under canvas or in temporary barracks, and proper provision is made for their health, comfort, and instruction. As a rule, such camps or cantonments should fulfill the following conditions:

1. The grounds should be easily drained, naturally healthful, large enough for depots, corrals, hospitals, etc., and the encampment of the troops without crowding, and with ample space for exercise and instruction.
2. The water supply should be excellent and abundant and not liable to contamination from any source.
3. There should be ample railroad and switching facilities and suitable arrangements for loading and unloading, as the fundamental reasons for the mobilization or concentration will be defeated if ample rail or water facilities are not available to promptly receive and dispatch troops and supplies.
4. All parts of the camp should be readily accessible by good wagon roads.

All arrangements for the accommodation and supply of the troops should be completed before their arrival by the permanent camp personnel sent ahead for the purpose. Camps are laid out so as to preserve the integrity of units, the headquarters of each being centrally or conveniently located with respect to its troops; tents are pitched and aligned, kitchens equipped, water and fuel supply arranged, latrines prepared, hospitals erected, and arrangements made for ample mail, telegraph, and telephone service. The general headquarters should be centrally located and connected by wire with the principal subordinate headquarters. Depots and storehouses are placed at railroad sidings and the hospitals near the railroad station Trains are placed so as to interfere as little as possible with the comfort and cleanliness of the troops.[1]

No individuals, troops, or trains of organizations temporarily present should be attached to the permanent camp personnel, if it can be avoided It is the function of the permanent camp personnel to operate depots, hospitals, to maintain camp telephone and telegraph lines, etc. The troops temporarily present must be in constant readiness to move.

---

[1] See semipermanent camps, p. 174.

SHELTER IN THE THEATER OF OPERATIONS.

237. Tactical considerations demand greater concentration and generally control the location of the camp.

If troops are actually engaged in field operations, their equipment, including tentage, is necessarily limited to that carried on the men, on animals, and in trains. In certain instances, after proper sanitary inspection, local buildings in the theater of operations may be used to advantage in affording additional shelter to officers, enlisted men, and animals.

If the length of a halt, during the period of operations, is of some considerable duration, when practicable, additional camp equipment (baggage, tents, surplus kits, etc.) are sent up from the line of communication and temporarily placed at the disposition of organizations. In this instance every possible use is made of local buildings and temporary structures, to the end that the troops be made as comfortable as possible during the period of the halt.

238. Selection of Site.—There is often little choice in the selection of camp sites in war Troops may have to camp many nights on objectionable ground. Nevertheless, sanitary considerations are given all the weight possible consistent with the tactical requirements.

When tactical questions are not involved, and especially when the camp is to be occupied for some time, great care is exercised in selecting the site. Through no fault of their own, troops occupying an unsanitary site may suffer greater losses than in the battles of a long campaign. A medical officer assists in the selection of camp sites.

The selection of camp sites while on the march or during active operations is governed by the following conditions·

1. The ground should accommodate the command with as little crowding as possible, be easily drained, and have no stagnant water within 300 yards.
2. The water supply should be sufficient, pure, and accessible.
3. There should be good roads to the camp and good interior communication.
4. Wood, grass, forage, and supplies must be at hand or obtainable.

Closely cropped turf with sandy or gravelly subsoil is best; high banks of rivers are suitable, provided no marshes are near.

In hot summer months, the ground selected should be high, free from underbrush, and shaded with trees if possible.

In cold weather ground sloping to the south, with woods to break the north winds, is desirable.

Old camp grounds and the vicinity of cemeteries are undesirable. Marshy ground and stagnant water are objectionable on account of the damp atmosphere and the annoyance and infection from mosquitoes. Ground near the foot of a hill range generally has a damp subsoil and remains muddy for a long time. Thick forests, dense vegetation, made ground, alluvial soil, punch-bowl depressions, inclosed ravines, and dry beds of streams are unfavorable.

Camp sites should be selected so that troops of one unit need not pass through the camp grounds of another.

As a protection against epidemics, temporary camp sites in the theater of operations should be changed every two or three weeks.

239. Form and Dimensions of Camps.—The forms of the camp should be such as to facilitate the prompt encampment of troops after a march and their prompt departure when camp is broken. The form of camps will depend upon the tactical situation and the amount and nature of ground available. In certain cases, particularly in one-night halts in the presence of the enemy, camps must of necessity be contracted, while in other cases, where a more extended halt is contemplated and where tactical reasons will permit, better camp sanitation may be secured, and a more comfortable arrangement made by the expansion of camp areas.

Appendix 1 (p. 172) gives the general forms, dimensions, and interior arrangements of camps of troops and trains. It also shows and explains the contracted camping areas.

240. Establishing the Camp.—Camp is established pursuant to the halt order. This order provides for the outpost, if necessary, and gives instructions for the encampment of the main body. When practicable, large commands are encamped by brigades.

The camping ground may be selected by the supreme commander, but in large commands is generally chosen by a staff officer sent forward for that purpose. This officer, with a representative from each brigade and regiment and a medical officer, precedes the command, selects the camping ground, assigns sections thereof to the larger fractions of the command, and causes them to be conducted to their respective sections on arrival. He also designates the place for obtaining drinking and cooking water, for watering animals, for bathing, and for washing clothing, in the order named, from upstream down.

On the arrival of the troops, guards are posted to enforce proper use of the water supply; the interior-camp guards proceed to their places, and after posting sentinels, pitch their tents. The remaining troops pitch tents and secure animals and equipment; kitchens are established and details made to procure fuel, water, forage, etc., and to prepare latrines and kitchen pits; if necessary, tents, company streets, and picket lines are ditched.

In the presence of the enemy, places of assembly for the troops are designated and directions given for their conduct in case of attack. Lines of information are established with the outpost.

241. Billeting.—When troops are to be billeted a staff officer and a representative from each brigade and regiment precede the column. The staff officer confers with the civil authorities, if present, makes an equitable division of the available quarters into distinct sections, and assigns a section to each regimental representative; the latter distributes the quarters to the troops of his regiment and conducts them to their places on arrival.

Unless the force is small, shelter of this character is usually inadequate, and some of the troops must use shelter tents or bivouac. Villages and large farms often afford facilities, such as wells and cisterns, bakeries, blacksmith shops, material for repairs, fuel, and forage, which contribute to the comfort of the troops; it is therefore advantageous to camp or bivouac near them.

242. Bivouacs.—On marches or in the presence of the enemy troops are frequently forced to bivouac on account of lack of suitable ground or for tactical reasons. (See par. 227.) On the other hand, in fine weather, in midsummer, or in the dry season in the Tropics, the troops may bivouac from choice.

From the tactical point of view, bivouacs are very convenient, but for sanitary reasons they are resorted to, as a rule, only when necessary. The general principles governing the selection of camp sites apply to bivouacs. The ground should be dry and protected against sun and wind. Light woods are nearly always good sites for infantry bivouacs, on account of the shelter and material available.

In the artillery on marches from day to day the men may be permitted to sleep under carriages or paulins covering the harness, thus obviating the necessity of pitching tents.

SHELTER DURING BATTLE.

243. During a lull in an engagement, or when hostilities are suspended for the night, the troops bivouac in line of battle on or near the position they occupy, the officers in rear of the center of their units. Reserves required to remain in instant readiness generally bivouac in column with a flank to the front. After the outposts are established, the commander of the main body decides whether the troops shall use their shelter tents or not. (See "Bivouacs on the Battlefield," p. 101.)

SHELTER DURING SIEGES.

244. On account of the long range of modern fortress artillery, the camps or cantonments of the main body of the besiegers, unless good cover is available, are generally not less than 5 miles from the enemy's works. To guard against sorties a large part of the command is continually on outpost duty, but when that duty is completed the troops return to their own camp with the main body in order to recuperate from this arduous work.

To guard against danger from epidemics in the necessarily crowded camps or cantonments of the besiegers, the most careful attention is paid to the water supply and sanitation.

CARE OF TROOPS.

245. Lack of sufficient rest renders troops unfit for hard work and diminishes their power of resisting disease. Therefore commanders should secure for the troops, whenever possible, their accustomed rest.

The rules of sanitation are enforced

Men should not lie on damp ground. In temporary camps and in bivouac they raise their beds if suitable material, such as straw, leaves, or boughs can be obtained, or use their ponchos or slickers. In cold weather and when fuel is plentiful the ground may be warmed by fires, the men making their beds after raking away the ashes.

When troops are to remain in camp for sometime all underbrush is cleared away and the camp made as comfortable as possible. Watering troughs, shelter in cold weather, and shade in hot, are provided for the animals, if practicable.

In camps of some duration guard and other routine duties follow closely the custom in garrison. The watering, feeding, and grooming of animals take place at regular hours and under the supervision of officers.

The camp is policed daily after breakfast and all refuse matter burned.

Tent walls are raised and the bedding and clothing aired daily, weather permitting.

Arms and personal equipments are kept in the tents of the men. In the cavalry, horse equipments are also usually kept in the tents, but in camps of some duration they may be placed on racks outside and covered with slickers. In the artillery, horse equipments and harness are placed on the poles of the carriages and covered with paulins.

The water supply is carefully guarded. When several commands are encamped along the same stream this matter is regulated by the senior officer.

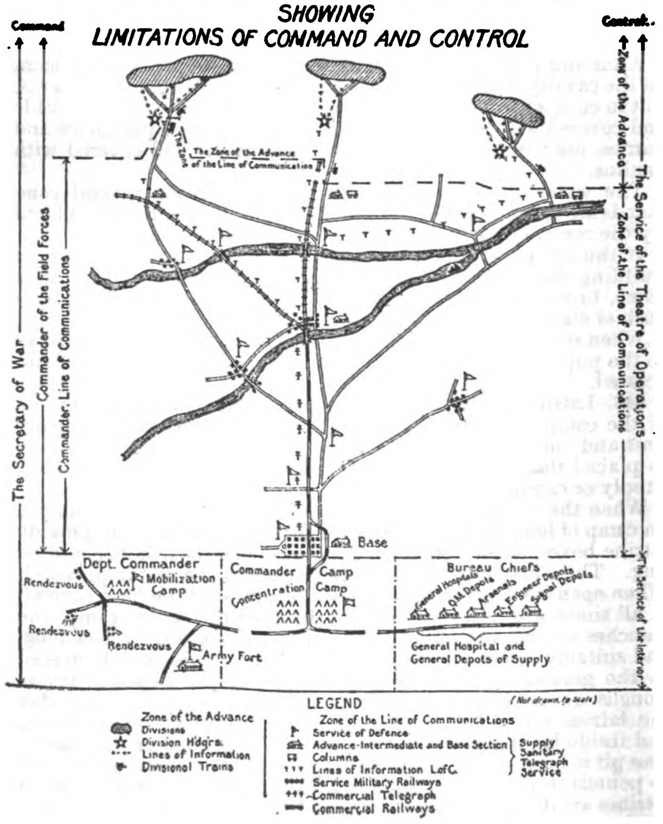
If the stream is small, the water supply may be increased by building dams. Small springs may be dug out and lined with stone, brick, or empty barrels. Surface drainage is kept off by a curb of clay.

When sterilized water is not provided, or when there is doubt as to the purity of the water, it is boiled 20 minutes, then cooled and aerated.

246. Latrines for the men are always located on the opposite side of the camp from the kitchens, generally one for each company unit and one for the officers of a battalion or squadron. They are so placed that the drainage or overflow can not pollute the water supply or camp grounds.

When the camp is for one night only, straddle trenches suffice. In camp of longer duration, and when it is not possible to provide latrine boxes, as for permanent camps, deeper trenches should be dug. These may be used as straddle trenches or a seat improvised. When open trenches are used the excrement must be kept covered at all times with a layer of earth. In more permanent camps the trenches are not over 2 feet wide, 6 feet deep, and 12 feet long, and suitably screened. Seats with lids are provided and covered to the ground to keep flies from reaching the deposits; urinal troughs discharging into the trenches are provided. Each day the latrine boxes are thoroughly cleaned, outside by scrubbing and inside by applying when necessary a coat of oil or whitewash. The pit is burned out daily with approximately 1 gallon oil and 15 pounds straw. When filled to within 2 feet of the surface, such latrines are discarded, filled with earth, and their position marked. All latrines and kitchen pits are filled in before the march is resumed. In permanent camps and cantonments, urine tubs may be placed in the company streets at night and emptied after reveille.

OUTLINE OF THE SYSTEM OF ADMINISTRATION SHOWING LIMITATIONS OF COMMAND AND CONTROL


Command
Control
The Secretary of War
Commander of the Field Forces
Commander, Line of Communications
The Zone of the Advance
The Zone of the Advance of the Line of Communication
Zone of the Advance
Zone of the Line of Communications
The Service of the Theatre of Operations
The Service of the Interior
Base
Dept. Commander
Rendezvous
Mobilization Camp
Rendezvous
Rendezvous
Army Fort
Commander
Concentration
Camp
Camp
Bureau Chiefs
General Hospitals
Q.M. Depots
Arsenals
Engineer Depots
Signal Depots
General Hospital and General Depots of Supply
LEGEND
(Not drawn to scale)
Zone of the Advance
Divisions
Division H'dq'rs.
Lines of Information
Divisional Trains
Zone of the Line of Communications
Service of Defence
Advance-Intermediate and Base Section
Columns
Lines of Information L of C.
Service Military Railways
Commercial Telegraph
Commercial Railways
Supply
Sanitary
Telegraph
Service

Part III.

ADMINISTRATION.

Article I.

GENERAL.

247. In time of war the activities of the military establishment embrace:

(*a*) The service of the interior.
(*b*) The service of the theater of operations.

248. The service of the interior is carried on by:

(*a*) Department commanders.
(*b*) Bureau chiefs, having for this purpose general depots of supply, genera hospitals, arsenals, etc.

249. The service of the theater of operations is carried on by the commander of the field forces. The theater of operations is divided into two zones:

(*a*) The zone of the line of communications.
(*b*) The zone of the advance.

The service of the interior functions both in peace and in war; that of the theater of operations in war only.

Article II.

THE SERVICE OF THE INTERIOR.

GENERAL.

250. The function of the service of the interior, in time of war, is to supply the commander of the field forces with the means necessary for the accomplishment of his mission.

This service is carried on by the bureau chiefs, department commanders, and in certain instances by commanders of concentration camps and of ports of embarkation. Their respective operations are directed and coordinated by the Secretary of War through the medium of the Chief of Staff.

In general the functions of the bureau chiefs and the department commander are as follows:

251. **Bureau Chiefs.**—They are the advisers of the Secretary of War and the Chief of Staff on all matters connected with the operations of their respective departments or corps throughout the entire military establishment.

They are kept informed of the plans of the field forces and recommend the steps to be taken to insure the successful execution of these plans, as far as their respective corps or departments are concerned.

They control directly and are responsible for the efficient operation of the general depots of supply, general hospitals, arsenals, and other military establishments placed under their orders.

They are charged with the accumulation of the necessary supplies and matériel and with forwarding the same, in accordance with regulations, to the point where they come under the control of the department commander, the commander of the field forces, the commander of the port of embarkation, and in certain instances the commander of a concentration camp.

They formulate estimates for the necessary appropriations to carry on the operations of their respective departments or corps.

252. **Department Commander.**—He is responsible for the recruitment, training, and equipment of all military forces not specially excepted within the limits of his department, and for their mobilization and dispatch to concentration camps.

He is advised by the War Department where troops of his command are to be sent, the time at which they should arrive, and the commander to whom they should report. He is responsible for their movement, transportation, and supply while en route.

He is responsible that adequate records of physical examinations are prepared and that all men going forward to the theater of operations are protected by the prescribed prophylactic treatments.

He keeps the War Department informed of the state of preparedness of the troops under his command.

He is responsible for the defense of all portions of his department except where an independent commander has been assigned by War Department orders. In this latter case the responsibility of the department commander does not extend to the area of operations of the independent commander.

MOBILIZATION AND CONCENTRATION.

253. Mobilization Camps.—A mobilization camp is a place, in the territory from which the troops are drawn, where they are assembled to be raised to war strength, equipped, and prepared for service.

The mobilization of the Regular Army will be effected at their permanent stations. Recruits, after being armed, equipped, and trained at the recruit dèpots, will be forwarded to their respective organizations.

The mobilization of the organized militia and volunteers will be effected at mobilization camps.

The general instructions relative to mobilization are published in regulations or in War Department orders.

Department commanders are responsible that all military organizations leave mobilization points: (1) with the full equipment required by existing orders; (2) with sufficient rations and grain to fully supply them while en route; and (3) with two days' rations and grain for use after their arrival at the concentration camps.

254. Concentration Camps.—A concentration camp is a place near the scene of intended operations or near an embarkation point, where troops are assembled for immediate use against the enemy or for transport to an oversea theater of operations.

The command of troops at a concentration camp lies with the department commander in whose territory the camp is situated, unless these troops pertain or are assigned to a commander not under the department commander's orders prior to the concentration.

The commander of the concentration camp deals directly with the War Department. In cases where it is desired to make an exception to the foregoing rule, or where doubt may exist, the authority ordering the concentration should define in orders upon whom the command falls and to whom the commander reports.

255. Concentration Camp at a Port of Embarkation.—In case the concentration is ordered at a port of embarkation already provided by higher authority with a staff for receiving and forwarding troops, the responsibility for camp sites and facilities and the necessary supplies devolves upon the commanding officer of the port of embarkation. Under these circumstances the necessary staff officers will be sent in advance by the commander of the troops ordered to the camp to cooperate in making the detailed arrangements. But in case no such permanent staff is provided at the port of embarkation, the staff of the command concerned must make all provisions for receiving, camping, and supplying the troops. The necessary supplies are obtained by ordinary methods of requisition or purchase.

256. Concentration at a Point near the Scene of Intended Operations.—In case the concentration is ordered at a point near the scene of intended operations when troops are assembled for immediate use against the enemy, the necessary line of communications personnel will, if practicable, be ordered by the War Department to report to the commander of these troops and will be sent in advance by him to the camp to make all preliminary arrangements for receiving, camping, and supplying the troops. If, however, no additional personnel for the line of communications is provided by the War Department, the commander of the troops concerned designates the necessary personnel from his own command and sends them ahead to make the preliminary arrangements.

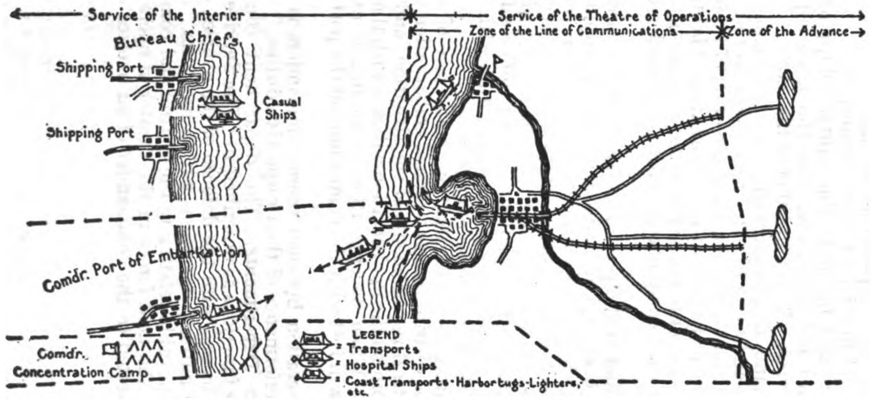
257. Duties of the Commander of the Port of Embarkation.—The duties of the commander of the port of embarkation are as follows:

(*a*) To arrange camps for the troops at or near the port of embarkation.

(*b*) To accumulate supplies for the maintenance of the expeditionary force while at the port of embarkation and until its arrival at the port of debarkation.

(*c*) To accumulate and ship the necessary supplies for the maintenance of the troops at the oversea base pending the organization of the supply services in the theater of operations.

(*d*) To make all detailed arrangements for the prompt detraining of troops and material and for their subsequent embarkation.


Service of the Interior
Service of the Theatre of Operations
Zone of the Line of Communications
Zone of the Advance
Bureau Chiefs
Shipping Port
Casual Ships
Shipping Port
Comdr. Port of Embarkation
Comdr. Concentration Camp
LEGEND
= Transports
= Hospital Ships
= Coast Transports-Harbortugs-Lighters, etc.

Over Sea Operations - Showing Limitations of Contrc' (*e*) To see that the ships furnished him by the Quartermaster Corps are properly fitted out for use as transports.

(*f*) To operate and maintain the military shipping and traffic between his port and the oversea base through a superintendent of transport service, who is a member of his staff.

(*g*) To command all administrative groups assigned to the port of embarkation and to be directly responsible to the War Department for the efficient and economical direction of their operations.

The commander of the port of embarkation, his staff and personnel, are not subject to the orders of the commander of the troops at the concentration camp nor the latter commander to the orders of the former.

The commander of the port of embarkation prepares the schedules for the embarkation of troops, matériel and supplies on transports, and has charge of such embarkation. The commander of the camp issues the orders necessary to carry out these schedules and details a staff officer to assist the commander of the port of embarkation during the loading. Under all conditions these schedules will be made only after consultation with the superior commander of the troops to be embarked.

When a landing or disembarkation in the face of opposition is anticipated, the distribution and plan of embarkation will be made to suit the tactical requirements of the situation, and in case of a difference of opinion the final decision will rest with the commander of the troops. When no opposition to landing is expected, the final decision will rest with the commander of the port of embarkation.

Cordial cooperation between these commanders is essential to the efficient performance of their respective duties.

258. Oversea Departments.—The department commander, in addition to his functions as described in "The Service of the Interior," is also charged with the defense of the oversea department, and directs all military operations within its limits. Such regulations as are applicable relating to the control and command of the commander of the field forces in the theater of operations are, in time of war, vested in the commander of an oversea department.

Article III.

THE SERVICE OF THE THEATER OF OPERATIONS.

GENERAL.

259. In the theater of operations the functions of the War Department and of the various commanders are, in general, as follows:

The War Department designates the commander of the field forces, assigns him a definite mission, prescribes the zone under his command, and supplies him with the means necessary to the accomplishment of his mission

The commander of the field forces exercises supreme authority over all military and administrative matters within the zone assigned him, organizing the means placed at his disposal so as to insure efficiency, and directing and controlling all operations necessary to the accomplishment of his mission

The commander of the line of communications is responsible to the commander of the field forces for the efficient operation and defense of the line of communications and directs and controls all administrative and staff services attached thereto

HEADQUARTERS AND STAFFS.

260. All military units larger than a company have headquarters and staffs. The headquarters of squadrons, battalions, and brigades have no administrative functions. The headquarters of an independent detachment has for the time being administrative functions and during such periods is temporarily assigned an administrative staff.

The commander of an army concerns himself with only the broad questions of strategy and military policy. He assigns general missions to his subordinate commanders and leaves them to work out the necessary details. On this account he is assigned only such administrative and technical staff as he may require for these broad functions.

The staff functions of the headquarters of units larger than a brigade may be separated into two groups, i. e. (1) general staff group; and (2) a technical and administrative group—record, inspection, law, supply, sanitary, engineer, ordnance, and signal.

261. The General Staff.—The Chief of Staff is the mouthpiece of his commander and should enjoy his complete confidence and a considerable degree of independence in the performance of his duties. He controls and coordinates the operations of the troops and all administrative and technical services under the orders of his commander. He is provided with such assistants as are necessary. To each such assistant is particularly assigned the work of one or more of the three general divisions of general staff work, viz:

The first or combat section concerns itself with orders, movements, and dispositions of the forces; combats, detachments; war diaries.

The second or administrative section concerns itself with organization, losses, reinforcements, police and discipline; questions of supplies of all kinds; signal and telegraph service; evacuation and care of sick and wounded; relations with the line of communications and all general correspondence.

The third or intelligence section concerns itself with the movements and dispositions of the enemy, including exploration, reconnaissance, and the gathering and distribution of information; interpreters, newspaper correspondents, and various agents; relations with the enemy, flags of truce, deserters, and prisoners of war; relations with the civil authorities of the occupied territory, requisitions, etc.

262. Technical and Administrative Staff.—This includes the representative of the various staff corps and departments who may be assigned to the headquarters. These officers perform the duties appropriate to their office under the instructions of their commander. During the period of grand tactical operations with commands larger than a division and when a line of communication is in operation, their functions are advisory. Upon completion of the grand tactical operations and upon the discontinuance of an organized line of communications, or if no line of communications has been organized, these staff officers assume a more immediate control of their respective staff personnel, depots, hospitals, etc.

The functions of the technical and administrative staff of a division are so intimately connected with the maintenance of the division as to preclude the separation of any of its personnel for any extended period of time from its headquarters. These staff officers are the technical advisers of the division commander, and control directly the operation of such portions of their respective corps personnel as may be placed under their immediate orders.

263. The Commander of the Line of Communications.—This commander reports directly to the commander of the field forces.

The mission of the tactical units and administrative groups assigned to a line of communications is to relieve the combatant field force, as far as possible, from every consideration except that of defeating the enemy.

It is necessary that the commander of the field forces be relieved from the consideration of details and thus be free to consider the broad lines of action to be followed by his command.

A line of communications is not organized when a force can safely occupy a territory without military operations of an extensive character. In this case administration and supply naturally and properly follow the same general principles as with troops in the service of the interior

Article IV.

THE ZONE OF THE ADVANCE.

GENERAL.

264. The division is the great administrative unit and forms the model for the organization of the administrative service of smaller units operating independently. To the division alone are regularly attached ammunition, supply, sanitary, and engineer trains. Field army troops may be assigned to divisions for the purpose of supply and for the care and evacuation of their sick and wounded. In this instance the divisional trains of the division to which they are assigned must be increased. When field army troops are organized into a separate brigade their administration and supply follows the principles laid down for a division. In this instance the necessary ammunition, supply, and sanitary trains are organized and assigned to the brigade.

265. Military administration follows the fundamental principle that troops in action should not have their attention diverted from their task of defeating the enemy by anxiety concerning questions of supply or evacuation of sick or wounded. The impetus in all these matters should be given from rear to front, by the troops or services in the rear.

Normal routine requirements which can be foreseen are replaced automatically and without the preliminary of formal requisitions. This has particular application to furnishing rations, grain, ammution, and sanitary supplies.

266. It is the function of the line of communications to extend its lines so as to make contact with the divisions in advance, and not the latter's function to extend back.

During certain periods of time the line of communications will be within a short distance of the division, whereas, during other periods, for tactical and strategical reasons, this distance may be greatly increased, and often for short periods of time all connection between the line of communications and certain units of the division may be severed.

267. In principle, the administrative services of a division must have the same degree of mobility as the division itself. They should not be charged with taking care of supplies which can not be transported in the ammunition, supply, and engineer trains. The equipment of the sanitary train provides only necessities for the sick and wounded pending their immediate evacuation to the rear

268 It is the function of the administrative services of the line of communications or of the administrative services attached to camps, as the case may be, to relieve the division from the care of its sick and wounded, and to take care of all material which the division is not normally equipped to carry

269 In the preparation of these regulations, divisions, field armies, and armies are considered as operating in the zone of the advance The same general principles of administration hold with reference to these units when concentrated and operating in the service of the interior and in the zone of the line of communications

Transportation.

270 The function of combat, field, ammunition, supply, sanitary, and engineer trains is to keep the commands to which they are attached at all times ready for action without hampering their freedom of movement

To meet these requirements demands not only well-thought-out orders by the superior authority, but also the highest sense of responsibilty on the part of those in command of these trains

These officers must be prepared to make any sacrifice in order that their trains shall arrive at the destinations appointed at the hours fixed.

271 Baggage and other impedimenta must be reduced to a minimum, and as far as possible, all transport and material not actually required with the combatant field forces must be left in the zone of the line of communications, whence it may be sent forward as required

272. Commanders of organizations are responsible that no unauthorized vehicles accompany troops or trains, and that no unauthorized supplies or material are transported Train commanders and guards permit only those who are so authorized to ride on vehicles

273 Trains will always be halted on the right-hand side of the road, leaving the left-hand side clear for the passage of troops, ambulances, etc.

274. Trains.—Transportation attached to organizations is grouped under the following heads, i. e.:

(*a*) The trains assigned to organizations smaller than a brigade designated combat and field trains, respectively.

(*b*) The trains assigned to divisions, designated ammunition, supply, sanitary, and engineer trains, respectively.

In addition to the foregoing, there are ammunition, supply, sanitary, and engineer columns which are attached to and belong to the advance section of the line of communications. (See Par. 279.)

275. Combat Trains.—Combat trains include all personnel, vehicles and animals attached to organizations for transporting ammunition reserve and special equipment required during combat, including the mule or cart carrying sanitary first aid equipment. To them also are attached those vehicles required for the technical service of engineers and signal troops.

Combat trains remain at all times with the unit to which attached and follow it into action. In the cavalry and field artillery it may be advisable to temporarily separate combat trains from the troops.

276. Field Trains.—Field trains include all personnel, vehicles, and animals attached to organizations or headquarters for the transportation of the authorized allowance of baggage, rations, and grain, and include rolling kitchens, if supplied. Wagons of sutlers, correspondents, etc., accompanying a field force by proper authority are assigned to the field train of the organization to which their owners are attached. On the march the headquarters wagons of brigades and divisions are generally attached to some regimental field train.

Field trains are assigned to regiments and independent battalions and are habitually divided into two sections: (1) A baggage section carrying baggage; and (2) a ration section carrying rations and grain exclusively, and including rolling kitchens, if supplied.

For transportation of baggage each organization is assigned its proportionate space on the vehicles of the baggage section.

277. When an organization is operating independently, the field trains are under the direct control of the organization commander. When organizations are not operating independently, field trains are ordinarily ordered to be grouped by the division commander and the senior line officer present with the train assumes command and moves it as directed by the superior authority. When the field trains are ordered grouped with the divisional train they are, for the time being, under the orders of the commander of trains.

The field trains are not again placed at the disposition of the organization until so ordered by the division commander. During combat the division commander holds the grouped trains well to the rear, thus relieving the roads of unnecessary vehicles.

In the late afternoon, or at the end of a march or close of a combat, the division commander directs the field trains to move up immediately in rear of the troops, and informs the commanding officers of organizations that their baggage sections and one day's rations from their ration sections have been ordered to be at a designated place. The organization commander at once sends an orderly to the designated place to conduct the vehicles to the organization. As soon as practicable after the arrival in camp of the ration vehicles they are unloaded and, without delay, rejoin the grouped portions of the ration vehicles. The division commander usually returns the baggage sections to the same place early the following morning.

278. Ammunition, Supply, Sanitary, and Engineer Trains.—The ammunition train includes all vehicles, animals, and personnel employed in transporting the divisional artillery and infantry ammunition reserve, or in bringing up the same from the refilling point to the combat trains of organizations. (See Ammunition Service.)

The supply train includes all vehicles, animals, and personnel employed in transporting the divisional ration and grain reserve, or in bringing up the same from the refilling point to the distributing point. To it may also be attached herds of beef cattle, remounts, vehicles carrying reserve quartermaster supplies, and reserve transportation. (See Supply Service.)

The sanitary train includes all vehicles, animals, personnel, and reserve sanitary material, not attached to organizations, employed in collecting and caring for the sick and wounded of the division pending their evacuation by the line of communication. (See Sanitary Service.)

The engineer train includes all vehicles, animals, and personnel for transporting heavy entrenching tools, explosives, and other engineer equipment and material which, under ordinary conditions, is required to accompany the division. (See Engineer Train.)

279. Ammunition, Supply, Sanitary, and Engineer Columns.—These columns belong to the line of communications and are attached to the advance section of its supply, sanitary, and telegraph services. They are the means whereby transportation, equipment, supplies, evacuation, and field hospitals, and ambulance companies, not continually required with a division, may be pushed forward when needed. (See par. 377.)

280. Commander of Trains.—A commander of trains is assigned for each division, together with the necessary assistants and troops. He controls the marching and camping of the combined ammunition, supply, sanitary, and engineer trains. He is also charged with all matters of general police in the rear of the division while on the march and throughout the command while it is in camp. (See Military Police.)

281. When the trains of more than one division are marching on the same road, the field army commander or other superior authority designates an officer, usually a general staff officer, to decide all questions of precedence in the movement and camping of the trains of the different divisions.

282. When combat is imminent, the ammunition, sanitary, and engineer trains are ordered released from the control of the commander of trains, and thereafter during the period of the combat operate in the manner described hereafter. (See Ammunition, Sanitary Service, and Engineer Trains.)

Upon the completion of the period of combat and when no longer required to operate independently, these trains revert to the control of the commander of trains.

283. When troops are in camp, out of the presence of the enemy, ammunition, supply, sanitary, and engineer trains may be ordered released from the control of the commander of trains and operated directly under the orders of their respective chiefs of service.

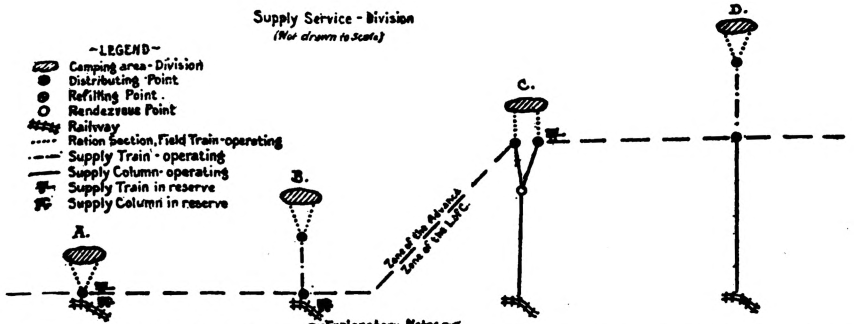
Supply Service.

284. The zone of activity of a division operating, for an extended period of time, in a country devoid of local resources, is limited by the extreme radius of supply of the available transportation from the line of communications.

As the amount of transportation with a division is necessarily limited, contact of such force with the line of communications can be maintained for only a short distance to the rear. This distance is dependent on the character and amount of transportation and the condition of the roads.

In territory not wholly devoid of local resources, the radius of supply can be increased to a greater or less extent, depending upon the use that can be made of these resources.

285. Refilling Point.—A refilling point is the place where the empty vehicles of the supply train are refilled by the line of communications. It may be a rail, automobile, tractor, wagon, or water



Supply Service - Division
(Not drawn to Scale)

~LEGEND~
Camping area - Division
Distributing Point
Refilling Point.
Rendezvous Point
Railway
Ration Section, Field Train - operating
Supply Train - operating
Supply Column - operating
Supply Train in reserve
Supply Column in reserve
A.
B.
C.
D.
Zone of the Advance
Zone of the L of C.

~Explanatory Notes~

A. Division being supplied directly from Distributing Point at railhead L of C. by Ration Section Field Train.
Supply Train and Column in reserve.

B. Division being supplied by Ration Section of Field Train from Distributing Point established by Supply Train. Supply Train being reloaded at Refilling Point.
Supply Column in reserve.

C. Division being supplied by Ration Section of Field Trains from Distributing Point established by Supply Column.
Supply Train in reserve.

D. Division being supplied from Refilling Point established by Supply Column and Distributing Point established by Supply Trains serving as connecting links with Ration Section of Field Trains.

head, and it may be at or in advance of the advance supply depot of the line of communications.

286. Distributing Point.—A distributing point is the place where the ration sections of the field trains are replenished either from the supply train or the line of communications; in the latter case either directly from its depots or by means of its supply columns When troops are advancing distributing points will usually be pushed forward close behind the troops, if possible, even up to the camping area, so that the ration vehicles may be able to refill without marching too far In a retreat it may be advisable to deposit supplies along the probable line of retreat

287. Rendezvous Point.—A rendezvous point is a place to which line of communications supply columns (usually auto-trucks or tractors with wagons) are dispatched and where they are met by an agent of the commander of the field forces and conducted to distributing points When it is possible to do so, rendezvous points may be fixed with advantage at the actual distributing points

288. Distributing points are fixed by division commanders

The commander of a force larger than a division may delegate to his division commander the duty of fixing the refilling or rendezvous points of their respective commands within certain prescribed limitations, or, on the other hand, he may himself fix these points

In the first instance the division commander is responsible for sending timely information of the point and hour selected to the assistant chief of staff of the advance section of the line of communications (See Par. 378.)

In the second instance the commander of the field forces notifies the division commander and the commander of the line of communications of the refilling or rendezvous point and the hour at which contact is to be made.

289. Source of Supply.—For troops in campaign there are two sources of supply, namely

1. The theater of operations.
2. The base.

It is generally necessary to utilize to the fullest extent the food, especially the forage, available in the theater of operations This becomes practically imperative when the line of communications runs through a country devoid of railroads and waterways.

When the theater of operations is in the home country or that of an ally, supplies are obtained by purchase; when in hostile territory, by purchase or requisition. It is a fundamental principle that all supplies available in the theater of operations should be utilized to the utmost.

290. Requisitions.—Requisitions are either (1) direct (foraging) or (2) by systematic collection into depots. Requisitions are resorted to only when authorized in orders of the commander of the field forces, and should be enforced by detachments commanded by a commissioned officer. Unauthorized seizure of property is punished as looting. The right to requisition food supplies in a hostile country covers the right to impress labor and means of transportation to facilitate delivery, and to make use of buildings, flour mills, bakeries, blacksmith shops, etc. Property obtained by requisition is either paid for or restored with suitable indemnification. If no reason to the contrary exists, better results are obtained when cash payment is made for supplies taken. If the supplies are not paid for upon delivery, receipts are given, copies or stubs being retained. These receipts are redeemed by the proper officer in accordance with the instructions of the commander of the field forces.

In the interests of the troops themselves, it is well, even in the enemy's country, to treat the inhabitants with the greatest consideration. At the same time, when the gravity of the situation demands it, due severity must be exercised toward hostile inhabitants. Leniency and negligence at the wrong time and place may lead to hardships for the troops.

291. Food supplies gathered by independent cavalry or advance guards in excess of their needs, are turned over to troops in the rear, and, correspondingly, those in excess of the needs of these latter troops or which can not be used for current issues or carried in the field and supply trains, are taken over by the line of communications.

292. While a well-organized system of requisitions is of great service, exclusive reliance can not be placed thereon, even in the most productive countries. As soon as the army halts, or when it advances slowly, recourse must be had to shipments brought up by the line of communications. (See Art. V.)

293. The Ration.—Upon arrival of troops at mobilization and concentration camps, the ration savings privilege is suspended and entirely replaced by issues of rations in kind. This same restriction holds during the period of hostilities.

294. The garrison ration is intended to be issued in kind whenever possible. The approximate net weight of the garrison ration is 4.5 pounds.

295. The reserve ration is the simplest efficient ration and constitutes the reserve carried for field service. The approximate net weight of the reserve ration is 2 pounds.

296. The field ration is the ration prescribed in orders by the commander of the field forces. It consists of the reserve ration in whole or in part, supplemented by articles requisitioned or purchased locally or shipped from the rear, provided such supplement or substitutes correspond generally with the component articles or substitute equivalent of the garrison ration.

297. In many cases it will be possible to supply a much more varied ration to troops of the line of communications and to the advance forces, when halted in the immediate vicinity of the line of communications, than to troops at a distance from it. The allowance of transportation for field rations with the division is based on carrying a 3-pound gross weight ration. While it will ordinarily be possible to supply the full garrison ration to troops in mobilization and concentration camps, nevertheless, in the absence of orders to the contrary, these commanders have the same authority as commanders of the field force in the theater of operations with reference to prescribing the ration to be issued their commands.

298. The forage ration is prescribed in Army Regulations.

299. In the field the authorized allowances must often be reduced and supplemented by grazing and other kinds of food, such as green forage, beans, peas, rice, palay, wheat, and rye. The amount of each issued depends upon circumstances. Wheat and rye should be crushed and fed sparingly (about one-fourth of the allowance). For unshelled corn, add about one quarter weight.

The commander of the field forces in the theater of operations may authorize in written orders the issue of increased allowances of forage for the animals of his command worn down by hard campaigning. Ordinarily this will be possible only during periods when the animals are within the immediate vicinity of the line of communications.

300. On the march grain is the only forage carried, and recourse must be had to grazing, if it is not possible to procure long forage in the country traversed.

The allowance of transportation of the forage ration with a division is based on carrying a 12-pound ration of grain for each horse and a 9-pound ration of grain for each mule.

301. Disposition of Rations.—Organizations of all arms of a division carry on the man or animal and in field trains the same number of days' rations. The same rule applies to grain carried on animals and vehicles. They are all distributed between men and vehicles of the ration section of the field train in the same manner and, therefore, must be replenished from the supply train or column at the same time.

302. In campaign a command carries as a part of its normal equipment the following rations and forage:

(*a*) On each man: At least two days' reserve ration. Civil employees, etc., accompanying the combatant forces are also required to carry with them the same reserve as enlisted men.

For each draft animal: On each vehicle, a reserve of 1 day's grain ration for its draft animals.

Reserve rations are consumed only in case of extreme necessity, when no other supplies are available. They are not to be consumed or renewed without an express order from the officer in command of the troops who is responsible for the provision of supplies, namely: the division commander or other independent detachment commander.

Every officer within the limits of his command is held responsible for the enforcement of this regulation.

Reserve rations consumed must be replaced at the first opportunity.[1]

In addition to the foregoing, commanders will require each man on the march to carry the unconsumed portion of the day's ration issued the night before, for the noonday meal. In the same manner, cavalry and field artillery carry on their horses a portion of their grain ration issued the night before, for a noonday feed.

(*b*) In the ration section of the field train: For each man two days' field,[2] one day's reserve, and for each animal two days' grain rations. Organizations equipped with rolling kitchens carry one day's field ration in the rolling kitchen, a corresponding reduction being made in the number of other vehicles attached to the ration section.

The one day's reserve ration is intended to provide for replacing immediately any reserve ration carried by the man which may be consumed. The two remaining days' field rations are more varied in character.

(*c*) In Supply Train:

Of an infantry division two days' field and grain rations.
Of a cavalry division one day's field and grain rations.

---

[1] This includes frequent renewal of the bacon component, which is liable to deteriorate.

[2] See par. 296 for composition of field ration.

Independent cavalry, when in front or on the flanks of an army, will have to depend to a great extent on the resources of the country. The rapid operations of cavalry often necessitate complete separation from slow moving field and supply trains during extended periods. Autotrucks are employed, whenever possible, in the supply of independent cavalry.

303. Operations of the Supply Service.—Ordinarily rations and grain are issued to troops during the afternoon from the ration section of the field train sent forward for the purpose. These supplies provide the evening meal, the following day's breakfast, and the lunch to be carried on the man, and in addition, grain for the evening's feed, the following morning's feed, as well as the noonday feed to be carried in the nosebag. (See Par 302.)

In the presence of the enemy the same method is used with organizations equipped with rolling kitchens, the endeavor being to furnish two hot meals evening and morning and a cold lunch to be carried on the man. When not in the presence of the enemy and on the march, the rolling kitchen usually marches with the combat train and a hot lunch is supplied.

Empty vehicles of the ration section are conducted to the designated distributing point at the hour specified (usually during the morning), refill, and rejoin the grouped field trains.

Rolling kitchens are refilled whenever empty, usually in the early morning, by the other vehicles of their ration section.

304. The supplies carried in the supply train may be held as a reserve or, on the other hand, the supply train may be so operated as to form the connecting link between the refilling point and the distributing point.

When operating as a connecting link, the supply train of a division is ordinarily divided into sections, each carrying one day's supply.

305. The service of supply is directed and controlled in orders and instructions issued by the division commander. These orders fix the distributing point or points to which the empty vehicles of the ration sections of the field trains are to be sent for resupply. The commander of trains is advised by division headquarters of the location of the refilling point to which the empty vehicles of the supply train can be sent for replenishment. The commander of trains then directs the movement forward of the necessary number of loaded vehicles of the supply train to the distributing points, and makes arrangements for their prompt return and for reloading all empty vehicles of the supply train at refilling points.

306. When supply columns are operated by the line of communications the division commander advises the assistant chief of staff of the advance section as to most convenient rendezvous point and has the supply column met at this point by a representative of the commander of trains and conducted to the distributing points.

307 The positions of the distributing points are subject to frequent changes and are ordinarily communicated to the division daily in orders. It is not necessary to inform the whole division as to the positions of refilling and rendezvous points, but information as to the points fixed must be communicated to the commander of trains.

308. The division quartermaster keeps the chief of staff informed at all times of the state of the ration and forage supply of the division, the condition of the quartermaster equipment and suggests the means for their replenishment. He controls the operation of detachments sent out for the purpose of purchasing or otherwise collecting supplies Such supplies, transport, or animals as may be procured are turned over to organizations or to the supply train. He daily formulates and presents to the chief of staff all orders relating to the resupply of the ration vehicles and advises as to the most suitable places for refilling, rendezvous and distributing points.

309. The quartermaster in charge of the supply train is the subordinate of the commander of trains and operates his train as directed by the latter authority He is responsible for the efficient operation of the supply train and commands its personnel.

310. Fresh Beef.—Whenever possible, troops should be supplied with fresh beef This supply may be effected either by driving herds of cattle with the supply train or preferably by sending up special transportation from the line of communications with frozen beef to the distributing points. In the first case the cattle are ordinarily slaughtered by the supply train personnel at appropriate times and turned over to the field trains at the distributing point.

In the second case the movement of the frozen meat to the designated distributing points is effected by the supply column of the line of communications.

311. Fresh or Field Bread.—Fresh or field bread is issued troops as often as possible. The bread is baked by bakery companies attached to the line of communications. Fresh bread is issued to troops in the immediate vicinity of the field bakeries. Field bread is issued and transported by supply and field trains in the same manner as other components of the ration.

312. Sales Stores.—Sales stores are not supplied in advance of the line of communications When troops have gone into permanent camp or cantonment, the advance end of the line of communications will usually be established at that point and stores sold It may be possible at certain times for the line of communication to send forward to the combatant troops transportation loaded with this class of stores.

Ammunition Service.

313 The system of replacing ammunition differs somewhat from that by which rations and grain are replenished No ammunition is obtainable locally and, therefore, all the mobile ammunition reserves with the division must be replaced by the line of communications The requirements of rations and grain are continuous, whereas the requirements of ammunition are spasmodic and neither the exact quantity nor the time of replenishment can be foreseen.

314. The organization and operation of the ammunition service is the duty of the field artillery The commander of the ammunition train is the immediate subordinate of the divisional artillery commander after the ammunition train has been released from the control of the commander of trains

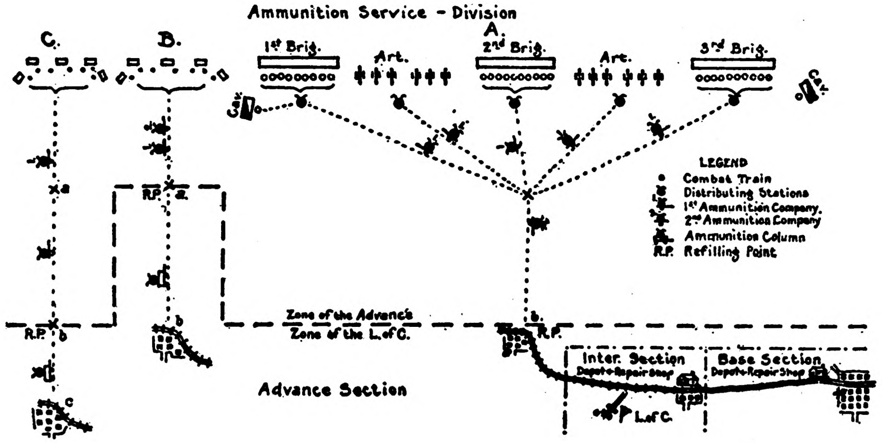
315. Ammunition carried on the man and on the caissons of the firing batteries is replaced by that carried in organization combat trains These latter trains are ordinarily refilled from vehicles attached to the ammunition train, though in certain instances they may be refilled directly from the line of communications or from ammunition columns.

316. It is the duty of commanders of all grades to see that due economy is exercised in the expenditure of ammunition and to make provision for its timely replenishment

No means should remain untried for bringing up ammunition to troops in action and for keeping up the fire, on the maintenance or cessation of which the success of the action may depend

317 It is the function of the organization commander to which a combat train is assigned to regulate the supply of ammunition from the combat train to the firing line, and to dispatch the empty vehicles of the combat train to the distributing station Battalion commanders are charged with keeping their combat trains properly filled and equipped

The principles under which this supply is effected are laid down in drill regulations.


Ammunition Service - Division
C.
B.
A.
1st Brig.
Art.
2nd Brig.
Art.
3rd Brig.
Cav.
Cav.
LEGEND
Combat Train
Distributing Stations
1st Ammunition Company.
2nd Ammunition Company
Ammunition Column
R.P. Refilling Point
R.P.
a
b
c
Zone of the Advance
Zone of the L. of C.
Advance Section
Inter. Section
Depot + Repair Shop
Base Section
Depot + Repair Shop
L. of C.

318. Ammunition Distributing Station.—An ammunition distributing station is the place where combat trains are sent to be resupplied [1]

Ammunition Refilling Point.—An ammunition refilling point is the place where the ammunition train is refilled.

Ammunition Rendezvous Point.—An ammunition rendezvous point is the place to which the ammunition columns of the line of communications are dispatched and where they are met by agents of the ammunition train and conducted to refilling points

319 The divisional ammunition service is directed by the commander of the ammunition train, and includes the supply of both small-arms ammunition and field-artillery ammunition

The ammunition train is organized either into two companies or into two battalions designated, respectively, the first and second ammunition companies or battalions, each battalion or company being further subdivided into infantry and artillery ammunition sections

320 The ammunition train carries the divisional ammunition reserve from which combat trains are refilled, and is a connecting link in the chain of ammunition supply from the refilling point of the line of communications to the ammunition-distributing station In principle, it is the function of the ammunition column to push up close to the rear of the troops and to maintain a constant supply of ammunition at the refilling point This has the effect of shortening the haul for the ammunition train

If no ammunition column be operated it is preferable to employ the second ammunition company or battalion in bringing up ammunition to some point designated by the ammunition-train commander, and in resupplying the first ammunition company or battalion vehicles at the same point In the latter case the first ammunition company alone establishes and maintains distributing stations.

321. For each division the positions of the ammunition-refilling point and the rendezvous point are fixed in the same manner as are the refilling and rendezvous points of the supply service (see Par. 288), and are communicated to the commander of the ammunition train by division headquarters.

322. In the case of a deliberate attack on the enemy in position or when our forces occupy a defensive position, the positions of the ammunition-distributing stations are fixed in orders by the division commander and communicated to the troops. In the case of a rencontre engagement the ammunition train is released from the control of the commander of trains and moved forward by its commander to some suitable point from which practicable routes radiate to the different portions of the probable line of battle This point is usually within 2 or 3 miles of the line of battle. From this point the commander of the ammunition train dispatches agents to the different brigade commanders for the purpose of arranging for the position of distributing stations and for investigating the best lines of approach to the same. If a battle has commenced, the commander of trains releases the ammunition train without waiting for orders and directs it to press forward to the field of battle

---

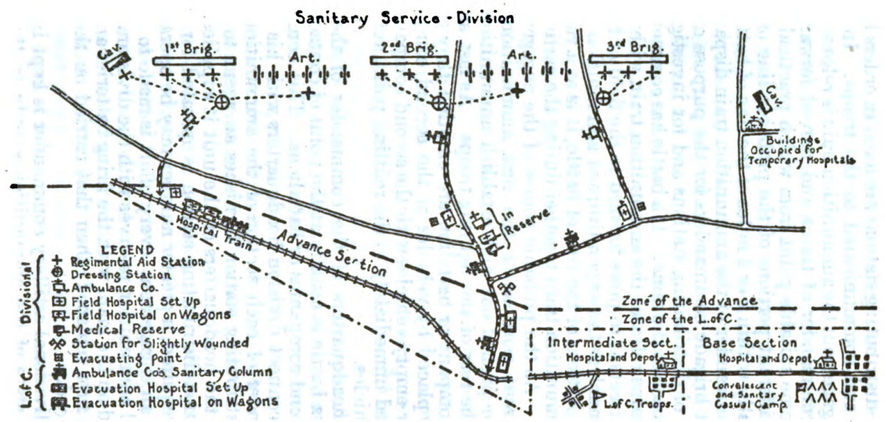
[1] In the field artillery, caissons of the firing battery may also be sent directly to the distributing station.

323. Inasmuch as the expenditure of ammunition will not be the same for all portions of the line of battle, it is as a rule desirable to hold the ammunition train together during the earlier stages of the engagement. As the probable course of the engagement becomes known different portions of the first ammunition company or battalion are pushed out and establish ammunition-distributing stations in the rear of the fighting troops. As fast as the vehicles of the first company or battalion are emptied they return and are refilled or replaced by vehicles of the second company In the same manner empty vehicles with the second company or battalion are dispatched immediately to the refilling point, refill, and rejoin the filled vehicles.

324. The headquarters of the commander of the ammunition train during a battle is usually at the point of contact between his first and second companies or battalions. This commander sends an agent to connect division headquarters with his headquarters. The commander of each section of the ammunition train establishing a distributing station furnishes an agent to connect such station with the headquarters of the unit it supplies. Ordinarily one ammunition-distributing station is operated for each brigade; however, if required, a greater number may be operated.

325. After an engagement every effort is made to replace, without delay, all ammunition reserves with the division. The ammunition carried on the man, with the firing batteries and on the combat trains is first replaced, then that carried on the ammunition train is replaced.

326. The divisional artillery commander is kept informed at all times of the state of the ammunition supply in the ammunition train; during action by the ammunition-train agent at division



Sanitary Service - Division

Cav.
1st Brig.
Art.
2nd Brig.
Art.
3rd Brig.
Cav.
Buildings Occupied for Temporary Hospitals
In Reserve
Hospital Train
Advance Section
Zone of the Advance
Zone of the L. of C.
Intermediate Sect.
Hospital and Depot
L. of C. Troops.
Base Section
Hospital and Depot
Convalescent and Sanitary Casual Camp
LEGEND
Divisional
+ Regimental Aid Station
⊕ Dressing Station
Ambulance Co.
Field Hospital Set Up
Field Hospital on Wagons
Medical Reserve
Station for Slightly Wounded
Evacuating point
L. of C.
Ambulance Co's. Sanitary Column
Evacuation Hospital Set Up
Evacuation Hospital on Wagons

headquarters and at all other times by reports from the commander of the ammunition train.

327. Ammunition-train commanders will comply with demands for ammunition from troops of other commands, provided that their own troops are in a position to spare it This has particular reference to supplying the needs of independent cavalry operating in the front and on the flanks of the field forces.

328. The positions of the ammunition train and its different sections when the latter are separated from the main train are marked by a red flag during the day and by a red lantern at night.

Sanitary Service.

329. In general, the functions of the sanitary service are as follows:

(*a*) The institution of all practicable sanitary measures, to the end that the fighting forces suffer no depletion in strength due to avoidable causes.

(*b*) The temporary care and professional treatment of the sick and wounded and their transportation to accessible points where they are transferred with as little delay as possible to the line of communications.

(*c*) The supply of the necessary sanitary equipment.

In addition, the sanitary service is charged with the preparation and preservation of individual records of sickness and injury in order that claims may be adjudicated with justice to the Government and the individual.

330. The personnel of the sanitary service in the zone of the advance may be classified into two general groups, as follows: First, that attached to organizations smaller than a brigade, which functions under the immediate orders of the organization commander and accompanies its unit into combat; second, that attached to the sanitary train, which functions under the orders of the division surgeon in accordance with such general or specific instructions as he may receive from the division commander When necessary the sanitary personnel attached to organizations may be temporarily detached, in whole or part, and directed to operate with the sanitary train.

331. Sanitation.—Officers and men of all arms must have a knowledge of sanitation and its importance, to the end that no depletion of the fighting force occurs through avoidable causes. The importance of adopting and carrying out proper sanitary measures can not be overestimated.

Commanders of all grades are responsible for the sanitary condition of the quarters or localities occupied by their commands and for the enforcement of all sanitary regulations. In addition they are responsible that all sanitary defects reported to them are promptly corrected.

A medical officer of experience, designated sanitary inspector, is charged, under direction of the division surgeon, with investigating and reporting upon the sanitation of the division to which he is attached. Sanitary inspectors report the result of their inspections to local commanders as well as to the division surgeon.

332. **First-Aid Packet.**—Every man with the division carries a first-aid packet. The sanitary detachments with organizations carry pouches containing appliances for first aid and stimulants. The combat train carries litters and the necessary equipment for regimental aid station.

333. **Regimental Aid Station.**—This station, established by each regiment or independent battalion during combat and when justified by the number of wounded, is the place to which all wounded of the organization are carried by its sanitary personnel, and where emergency treatment is administered. The position of the station is fixed by the organization commander and is as near the firing line as possible. This station will often be but little more than a place for assembling the wounded, as its personnel belongs to the organization and, therefore, must be prepared to move with it. After receiving emergency treatment all wounded able to walk (except those with trivial wounds, who are sent back to the line) are directed to the station for slightly wounded; those unable to walk are delivered to the bearers sent forward from the sanitary train.

The equipment of the regimental aid station is carried on the combat train. It is operated by the sanitary personnel of the organization.

334. **Dressing Stations.**—These stations, established during combat by ambulance companies of the sanitary train in the immediate rear of the line of regimental aid stations, are the places where all wounded unable to walk are collected from regimental aid stations by bearers of ambulance companies. If conditions so warrant, these bearers may be assisted in their work by portions of the organization sanitary personnel. From these stations the wounded are transported by ambulance companies back to field hospitals. The equipment of dressing stations is more elaborate than that of the regimental aid station. It provides light nourishment and stimulants for the wounded and affords facilities for more elaborate dressings and for emergency surgery.

The equipment for dressing stations and the necessary personnel are supplied by the ambulance companies of the sanitary train.

335. Ambulance Companies.—Ambulance companies push up close to the rear of the fighting troops and as near the line of regimental aid stations as possible and establish dressing stations. In addition to their functions at the dressing stations, they are charged with the transportation of the wounded back to field hospitals and with providing the necessary equipment for infirmary service in camps. When field hospitals have not been set up and when sanitary columns or railway hospital trains of the line of communications are reasonably accessible, ambulance companies transport the wounded directly to them.

336. Field Hospital Companies.—Field hospital companies form part of the sanitary train. They are set up when conditions so warrant, ordinarily some 3 or 4 miles from the battlefield, and are the places to which the wounded are transported by ambulance companies. Their position must be one accessible both from the front and rear and where good water is available. Field hospitals are not set up when the sick or wounded can be turned over conveniently to elements of the sanitary column or railway hospital trains of the line of communications. Canvas is pitched only when buildings are not available or are inadequate for the purpose of housing the wounded.

The equipment of field hospitals, while more elaborate than that of dressing stations and while providing canvas for protection of the wounded from the weather and facilities for more extended surgical work, is nevertheless limited to providing necessities for the sick and wounded pending their evacuation to the rear by the line of communications. (See also par. 268.)

337. Evacuation Points.—The sanitary column of the line of communications includes ambulance companies and evacuation hospitals; there may also be available railway hospital trains and boats, any or all of which may be used as the means for the evacuation of the sick and wounded from the division. The places at which the sick and wounded are transferred from the division to the line of communications elements are termed evacuating points.

The positions of evacuating points are fixed in the same manner as is the refilling point of the supply service (see par. 288) and communicated directly from division headquarters to the commander of the sanitary train.

338. Station for Slightly Wounded.—A station for slightly wounded is established when combat is imminent to relieve dressing stations and field hospitals of the slightly wounded who can walk and require but little attention. Its position is fixed in division orders. It is operated by the personnel of the sanitary train detailed for the purpose. It is conspicuously marked so that it can be readily found.

339. The Sanitary Train.—The sanitary train is composed of ambulance companies, field hospital companies, and camp infirmaries. The sanitary train is commanded by the division surgeon, or in his absence, by the senior medical officer of the attached elements, who, upon its release from the control of the commander of trains, operates it in accordance with orders or instructions received from division headquarters.

340. Service in Camps.—In camps an ambulance service is furnished from the sanitary train. Infirmaries are set up at convenient points by order of the division surgeon and operated by the sanitary personnel attached to the organizations which the infirmary serves. Here cases not requiring hospital treatment are cared for, all other cases being promptly removed by the ambulance service. The senior medical officer of the units served by the infirmary assumes charge of the same and is authorized to call directly on the other organizations for their proportionate share of medical officers and sanitary personnel for the infirmary service. The sergeant, Hospital Corps, detailed with the infirmary remains with it in charge of the equipment. If necessary, field hospitals are set up for the reception of the seriously sick and wounded.

341. Service on the March.—When out of the presence of the enemy ambulances are ordinarily ordered distributed by the division commander throughout the column, in the rear of regiments, battalions, etc. A camp infirmary is assigned to each brigade and marches in its rear, and a field hospital should be so located in the column of march as to permit of its being available for the reception of seriously sick and injured as soon as possible after the arrival of troops in camp.

342. During marches in the presence of the enemy, ambulance companies are kept intact. It may be advisable to assign one or more of these companies to a position in the column of the combatant troops, but any further dispersion is inadvisable. When combat is imminent and when so ordered by the column commander, the ambulance companies fall out of the column, and as soon as the combatant troops have passed they proceed to function as described in "Service in Combat." (See Par. 111.)

343. A man falling out from sickness or injury is sent with a pass, showing his name, company, and regiment or corps to the medical officer in the rear. The latter returns the pass, having indicated thereon the disposition made of the man.

If the man is unable to walk he is picked up by the first ambulance and cared for If able to walk he may either be required to follow immediately behind his organization or ordered to await the arrival of the sanitary train. In the latter case, he is furnished with a tag showing the orders given him

The arms, personal equipment, and clothing of soldiers who fall out are carried with them.

The horse, saber, and horse equipment of a mounted soldier admitted to the ambulance, or otherwise disposed of, are taken back to the troops by the noncommissioned officer that accompanied him.

344. Service in Combat.—In the absence of medical assistance, the wounded apply their first-aid packets, if practicable. With this exception the care of the wounded devolves upon the sanitary troops, and no combatant, unless duly authorized, is permitted to take or accompany the sick or injured to the rear

345. The sanitary personnel of organizations must remain with it when advancing into action and during the whole course of an engagement. Accordingly the wounded will be treated where their wounds are received, and the sanitary personnel will pause, if the organization is moving, only so long as is necessary to give appropriate first aid. At a later stage of the combat, when the movement of the organization permits and when justified by the number of wounded, a regimental aid station is established and operated.

346. When combat is imminent, the station for slightly wounded is announced in division orders, and thereafter it is to this station that all disabled men able to walk are ordered to report. They are furnished with a tag showing the orders given them by the medical officer authorizing their proceeding to this station

347. The evacuation of the wounded from regimental aid stations when established, and the evacuation of the wounded left by the organizations during an advance when a regimental aid station has not been established, devolves on the personnel of the sanitary train. In the case of a deliberate attack on the enemy in position or when our forces occupy a defensive position, the positions of dressing stations are fixed in orders by the division commander, and communicated to the troops. The division commander in this case advises the commander of the sanitary train as to the position of the field hospitals.

348. In the case of a rencontre engagement, the work of establishing dressing stations, field hospitals, and of evacuating wounded during combat from the dressing station to the field hospital, or in certain cases directly to the line of communications, must be left to a great extent to the initiative and judgment of the commander of the sanitary train and his subordinates. To this end the commander of the sanitary train sends forward one or more ambulance companies to make contact in certain prescribed areas with the sanitary formations of the combatant units. When ambulance companies have been assigned positions in the column of march of combatant troops, they are ordinarily utilized in this work. The remaining ambulance companies ordinarily accompanied by one field hospital and under the immediate command of the sanitary train commander follow, and are held together in reserve at a certain prearranged position selected by the sanitary train commander and by him communicated to the commander of the ambulance companies sent ahead. The other field hospitals remain for the time being under the control of the commander of trains, to be brought forward later if required. The ambulance company commanders ordered to make contact with the combatant organizations push forward agents for the purpose of sanitary reconnaissance and for arranging for the position of the dressing stations and for determining the best lines of approach to them When so ordered they establish dressing stations and commence collecting wounded from the different regimental aid stations, ultimately sending them back to the field hospital at the prearranged point. The commander of the sanitary train keeps himself advised by means of agents of the progress and development of the battle and the number of casualties in certain areas and from these reports and from orders received from the division surgeon, he pushes forward additional ambulance companies when required, prescribing the area of their respective activity and the point to which their wounded are to be transported. At the same time he may order forward such additional field hospitals as may be required.

349. **Search for Wounded.**—After an engagement, commanders organize a thorough search of the battle field in their vicinity for the wounded and assist in their protection and removal. The dead are collected by details from the line as soon as practicable after the battle and disposed of as the commander directs. (See also par. 231.)

350. Before a command enters upon a campaign, every member thereof is provided with an identification tag by which he can be

identified if killed or wounded. Such tags are not removed from the dead, but are left on the bodies when interred or otherwise disposed of. Tags found on the bodies of the enemy's dead are collected and turned over to the commander of trains, who sends them to the provost marshal at the base.

351. Retreat.—In a retreat such portion of the sanitary personnel of the division as is required will remain with the sick and wounded that can not be moved, under the protection of the Red Cross flag.

352. American National Red Cross Association.—The services of this association, its equipment and personnel are utilized under the immediate direction of medical officers to the greatest extent possible in the care of sick and wounded in the service of the interior and on the line of communications. Their services are not utilized in the zone of the advance.

353. Badge of Neutrality.—The emblem of neutrality is a red cross on a white ground. All persons belonging to the sanitary service, including the red cross association personnel and chaplains attached to the army, wear on the left arm a brassard bearing this emblem stamped[1] by competent authority. Those not uniformed carry a certificate of identity in addition to the brassard.

All sanitary formations and establishments display a red cross flag accompanied by the national flag. At night the position of sanitary formations are marked by green lanterns.

ENGINEER TRAIN.

354. To each division is attached an engineer train which carries heavy intrenching tools, sandbags, reserve explosives, and other engineer material which may be required by the division during certain periods of combat (See par. 278.)

355. The organization and operation of the engineer train is the duty of the engineer corps. The engineer train is commanded by the senior engineer officer present with it, who, upon its release from the control of the commander of trains, operates it in accordance with the instructions of the senior engineer officer of the division.

356. The engineer column which is attached to the advance section of the line of communications includes in it such heavy engineer equipment as may be required, depending upon the character of operations reasonably probable, i. e., searchlights, pile drivers, map reproduction equipment, reserve of heavy intrenching tools, etc.

---

[1] For form of certificate see Rules of Land Warfare, United States Army.

The engineer column may be temporarily assigned in whole or part to divisions or to operate directly under the orders of field army headquarters in the zone of the advance. When so assigned, it is for the time being removed from the control of the commander of the line of communications. If assigned directly to field army headquarters it operates under the immediate orders of the chief engineer; if assigned to a division, it forms part of the engineer train. When no longer required in the zone of the advance, it reverts to the control of the commander of the line of communications. (See par 270.)

Article V.

THE ZONE OF THE LINE OF COMMUNICATIONS.

GENERAL.

357. A line of communications is established for each important force about to engage in field operations involving a movement from a base.

When two or more important forces are operating from a single base, they will be under the control of a single superior commander, and only one line of communications will be operated with a single base, and with such number of advance sections as may be required

358. A line of communications is not organized when a force can safely occupy a territory without military operations of an extensive character In this case administration and supply naturally and properly follow the same general principles as with troops in the home country.

359. The mission of the tactical units and administrative groups assigned to a line of communications is to relieve the combatant field force as far as possible from every consideration except that of defeating the enemy.

360. The point at which the base of a line of communications is to be established is fixed in War Department orders, upon recommendation of the commander of the field forces. The personnel for the line of communications comprises groups from every branch of the army and is sent ahead by the commander of the force to secure the base, and to make all arrangements for receiving, supplying, and forwarding the troops. If no additional personnel for this purpose has been assigned to the commander by higher authority, he details the necessary officers and men from the force under his command.

361 [illegible] zone of the line of communications embraces all territory from and including the base to the point or points where contact is made with the trains of the combatant field forces. The activities of the line of communications personnel are in general limited to this zone, except that lines of information are extended to contact with the headquarters of the field force, and that ammunition, supply, sanitary, and engineer columns will be pushed forward beyond this zone when necessary.

It is the duty of the commander of the line of communications to advance this line from time to time so as to maintain contact with the trains of the field forces.

362. Command.—All troops, military establishments and personnel in the zone of the line of communications, are under control of its commander, except such as may be specially exempted by War Department orders. He is responsible for the defense of the line of communications and for the government of that portion of the zone placed under military control.

363. Administration and Control.—For administration and control the line of communications is organized as follows:

(*a*) A service of defense.
(*b*) A supply, sanitary, and telegraph service.
(*c*) A service of military railways.

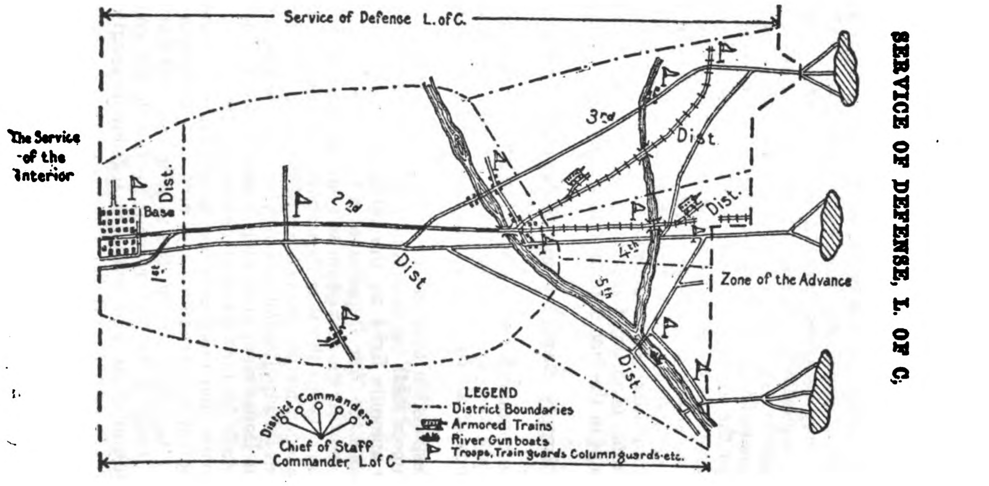
The senior staff officer of each group of the base section of the supply, sanitary, and telegraph service of the line of communications acts as technical adviser of the commander of the line of communications on all matters relating to the operation of his corps within the zone of the line of communications.

364. Staff officers belonging to organizations assigned to the service of defense have no responsibilities in connection with the operations of the supply, sanitary, and telegraph service other than those directly connected with their organizations.

365. Upon arrival at the base all persons under the War Department orders or with authority to join the field forces come at once under the orders of the commander of the line of communications and report their arrival at headquarters.

Service of Defense.

366. Suitable troops are assigned to duty under the commander of the line of communications and are charged under his orders with the defense of the line of communications and with the protection of all columns pushed out by the advance section of the supply, sanitary, and telegraph service. This territory is ordinarily divided into districts, each under a separate commander who is responsible for the defense and military police of his own district. These commanders have no control over properly authorized movements along the line of communications, of personnel, animals


Service of Defense L. of C.
The Service of the Interior
Base
1st Dist.
2nd Dist.
3rd Dist.
4th Dist.
5th Dist.
Zone of the Advance
LEGEND
District Boundaries
Armored Trains
River Gunboats
Troops, Train guards Column guards-etc.
District Commanders
Chief of Staff
Commander L. of C.

or matériel, except in case of imminent danger from the enemy They are then responsible that traffic is stopped until, in their opinion, it may be safely resumed, or until orders from superior authority are received. The action taken will be at once reported by telegraph to the chief of staff of the line of communications. Troops, ammunitions, or supplies going to the front are not to be diverted for the use of the line of communications troops, except by authority of the commander of the line of communications

367 When armored trains are used their crews will form part of the line of communications troops and are under the direct orders of the commander of the district in which they are operating Railway traffic is not to be interfered with by the use of armored trains except in the face of imminent danger from the enemy

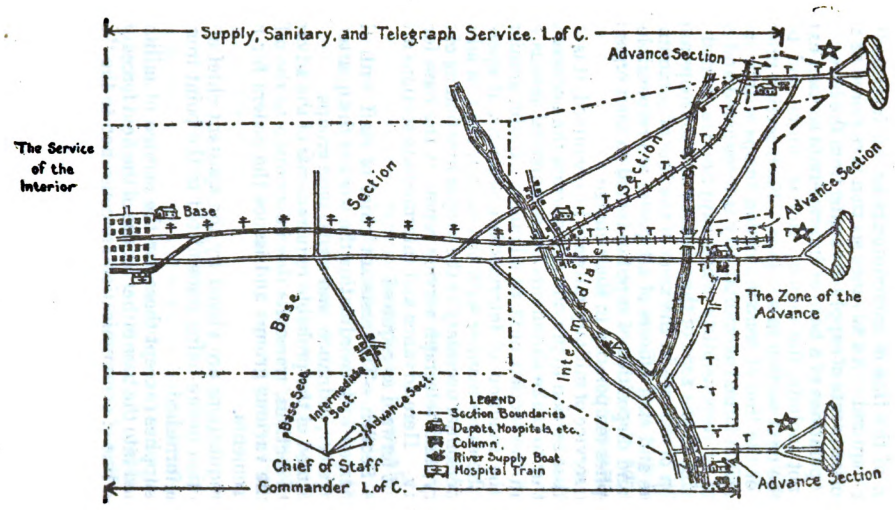
Supply, Sanitary, and Telegraph Service.

368. The commander of the line of communications is in charge of all supply and sanitary matters and of the construction and maintenance of all lines of information within the limits of his command

He is responsible that the reserve of supplies on hand in his various depots shall be maintained between the maximum and minimum amounts fixed by the commander of the field forces. He furnishes the War Department a copy of a list of the stores required, showing the maximum and minimum amounts to be kept on hand, and keeps the War Department informed of the amount of funds needed for the prosecution of his work. He forwards his requisitions for supplies not procurable in the theater of operations to the War Department or to such depots as the War Department may designate for furnishing particular supplies.

He prepares and enforces stringent regulations for the physical examination of officers and enlisted men, who are sick or wounded, to the end that the force in the theater of operations suffers no depletion incident to the return to the home country of malingerers, or those who within a reasonable length of time will be able to return to duty.

369. For purposes of control and coordination of the supply, sanitary and telegraph service, a line of communications is ordinarily divided into sections as follows A base section and an advance section, each with an assistant chief of staff in charge competent to issue orders in the name of the commander of the line of communications. In certain unusual cases, due to an extensive


Supply, Sanitary, and Telegraph Service. L of C.
Advance Section
The Service of the Interior
Base
Base Section
Advance Section
Intermediate Section
The Zone of the Advance
Base Sect.
Intermediate Sect.
Advance Sect.
Chief of Staff
LEGEND
Section Boundaries
Depots, Hospitals, etc.
Column
River Supply Boat
Hospital Train
Advance Section
Commander L. of C.

prolongation of the line of communications. an intermediate section may be required. An advance section is required at the head of each important route of supply diverging from the base.

370. The operations of a base or intermediate section extend up to, but do not include, the depots, sanitary units, and telegraph stations of the next section in advance. Each section provides for the supply of the line of communication troops within its limits. So far as possible formal accountability is terminated and replaced by a system of responsibility when supplies are turned over to troops or trains in the zone of the advance and to troops and trains of the section of defense in the zone of the line of communication. Commanders and staff officers of all grades are responsible for the proper use and disposition of supplies issued to their organizations and for supplies temporarily in their charge.

371. If no service of military railways be organized, it is the function of the base section to provide and operate the necessary means of transport or to make shipments by commercial means between the base and the section next in advance Under similar conditions it is the function of intermediate sections, if operated, to connect in the same manner with the section next in advance.

372. All personnel necessary to the proper functioning of the supply, sanitary, and telegraph service report at the base for assignment to duty. Here advance and intermediate sections are organized and sent forward as required.

373. Base Section.—The assistant chief of staff with the base section is charged with coordinating the work of the quartermaster, medical, engineer, ordnance, and signal base groups.

He is informed of the probable requirements of the advance and intermediate sections, transmits this information to the officers in charge of the various groups and issues the orders for meeting these requirements.

374. All requisitions are viséed by the assistant chief of staff of the base section before being transmitted to the point from which supplies are furnished.

375. All supplies (except those for the service of military railways) shipped into the base either for use of the field forces or for the troops of the line of communication are consigned to the "Quartermaster," "Surgeon," etc , at the base.

376. Advance Section.—The assistant chief of staff with the advance section is charged with coordinating the work of the quartermaster, medical, engineer, ordnance, and signal advance groups. The operations of these groups extend to and include the refilling points of the division supply trains, the evacuation points for sick and wounded, and, in certain instances, to the distributing points. (See par. 287.) The signal advance group establishes and maintains lines of information with the headquarters of the field forces.

377. To the advance section are attached ammunition, supply, sanitary, and engineer columns. The strength and composition of these columns are dependent upon the character of operations reasonably probable. (See par. 279.)

378. The position of the advance depot is fixed from time to time by the commander of the field forces. The headquarters of the advance section is at the advance depot and it is with the assistant chief of staff at this point that the commanders in advance make all arrangements for the evacuation of sick and wounded, and for supply.

Ordinarily the advance depot will be on a line of railroad, and as near the field forces as possible. In consequence, it is more or less exposed to the enemy and, therefore, an undue accumulation of supplies at this point is undesirable.

The positions of refilling, rendezvous, and evacuation points either may be fixed by the commander of the field forces or he may delegate in orders this authority to division commanders. (See par 288.)

379. The allowance of transportation fixed by regulations for the divisional trains is that needed for carrying mobile reserves and for bringing up from the line of communications ammunition, rations, and grain, and for the temporary care only of sick and wounded. For all other classes of supplies, for the evacuation of the sick and wounded, and for special engineer equipment, transportation must, therefore, be provided by the different columns attached to the advance section.

Service of Military Railways.

380. A service of military railways is organized when extensive military operations of a field force are dependent on a line or lines of railway for its supply in advance of the base. The construction, operation, and maintenance of these railways is a duty of the Corps of Engineers.

This service takes over from the field force all railways captured, assuming charge of their reconstruction, operation, and maintenance. It is also charged with the construction of new railway lines necessary for the supply of the field forces. It is controlled and directed by an officer detailed as director of railways, with a military controlling staff and an operating and constructing staff.

The director of railways is a member of the staff of the commander of the line of communications and is responsible to that commander for the successful operation, maintenance, and construction of the military railways. He receives his orders from that commander and takes the necessary steps to have them executed by his subordinates.

No military officer not attached to the service of military railways is allowed to give any orders to subordinates of the latter service or to interfere in any manner with the running of trains, except in the case of an impending attack. (See par. 366.)

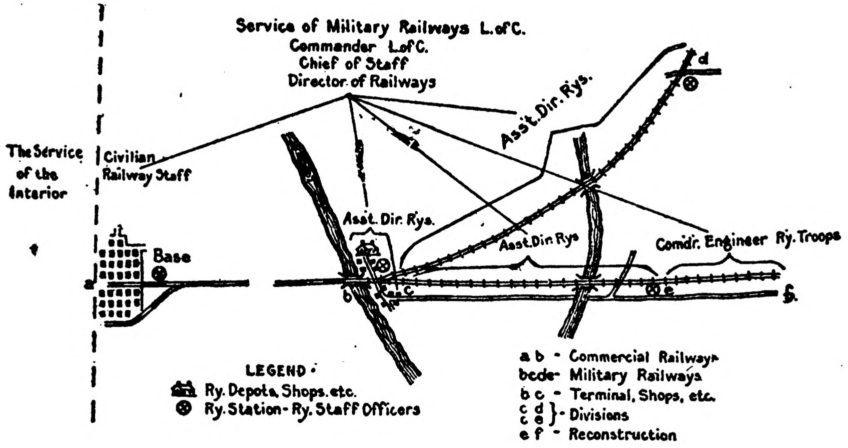
381. The military controlling staff is composed of such military assistants to the director of railways as the military conditions and the railway facilities require. Their duty is to represent the director of railways in the various departments or subdivisions of the railway to which they may be assigned, to facilitate and insure the execution of the approved plans for the working of the railways, and to supply the military knowledge not possessed by the civilian officials and operators.

If two or more lines of military railway exist, a member of the military controlling staff, called an assistant director of railways, may be assigned to each line and made responsible to the director of railways for its successful operation, maintenance, and construction. The director of railways in this case is responsible for the supervision of and cooperation between the several lines.

If any single line becomes long enough to subdivide into divisions, military conditions may require that a member of the controlling staff be assigned to one or more of these divisions. In this case he is responsible to his next military railway superior for its successful operation and maintenance.

At such important railway points as may be necessary there will be assigned railway staff officers, each of whom will be responsible to his next military railway superior for facilitating and expediting the railway operations at his station.

The work of reconstruction at the railhead will ordinarily be kept separate from the other work on the line in rear and will be done by troops, with such civilian assistance as is procurable. The officer in charge of this work will be directly under the military head of the line of railway on which he is working and is responsible for the prompt reconstruction of the line. As rapidly as practicable such reconstruction sections will be assigned to the division immediately in rear for operation and maintenance.


Service of Military Railways L. of C.
Commander L. of C.
Chief of Staff
Director of Railways
Asst. Dir. Rys.
The Service of the Interior
Civilian Railway Staff
Asst. Dir. Rys.
Asst. Dir. Rys
Comdr. Engineer Ry. Troops
Base
a
b
c
d
e
f
LEGEND:
Ry. Depots, Shops, etc.
Ry. Station - Ry. Staff Officers
a b - Commercial Railways
bcde - Military Railways
b c - Terminal, Shops, etc.
c d } - Divisions
c e
e f - Reconstruction

382. The staff of civilian assistants will consist of such railway officials, operatives, and other employees as may be available or necessary for the proper working of the military railways. As far as military conditions will permit, civilians will be used for the operation, maintenance, and construction of the military railways, officers and soldiers being used only when military conditions render it necessary These civilians are subject to military supervision, and will be responsible in their various departments and subdivisions for executing the duties assigned to them in accordance with the plans of the director of railways

383 The relations between the civilians of the railway service, except as modified by the director of railways, will be such as exist between those of corresponding grades on an ordinary railway The military staff receive their orders and instructions from their next higher military railway superiors, and are subject to them only Each member of this staff is the military adviser of the senior civilian in charge of the department or subdivision to which he is assigned He will ordinarily leave the actual working of the road to his civil colleague, advising him of the ends desired and the military conditions involved, and will intervene in the actual working of the road only when convinced that the civilian is not taking the necessary steps to meet the requirements. The officer's decision on matters within his own department or subdivision can be overruled only by his next military railway superior

384. The military railway supply depots are operated and maintained under the director of railways by the railway staff All railway supplies and materials shipped into the base will be consigned to the "director of railways."

Channels of Correspondence.

385. The commander of the line of communications must have the greatest possible freedom of action with reference to communicating with the War Department on matters of routine.

All such communications will be signed "By authority of the commander of the field forces" and will in general be confined to the following subjects, viz:

(*a*) Arrangements for maintaining the supply of stores and animals.
(*b*) Matters relating to fiscal affairs or requirements.
(*c*) Irregularities, defects and deficiencies which come to his attention in the territorial or administrative zone to the rear of the base.
(*d*) Arrangements for augmenting or replacing the staff and civilian personnel of the line of communications.
(*e*) Arrangements for the evacuation of prisoners and of sick and wounded from the base.

After the system of supply and evacuation of sick and wounded has been fixed by the commander of the field forces, the commander of the line of communications and the assistant chief of staff of each advance section are authorized to communicate directly with the commanders whom they are ordered to supply on all detail matters relating to supply, evacuation of wounded, and maintenance of lines of information. Inversely, such commanders are authorized to communicate with the assistant chief of staff of the advance section in their immediate rear or with the commander of the line of communications on the same subjects.

Article VI.

TRANSPORTATION BY RAIL.

386. Troops may be moved by rail over commercial railways or over military railways. The former condition will obtain in all movements in time of peace, and for most concentration movements in time of war. The latter condition will always obtain in the theater of military operations, and may obtain in concentration movements in our own territory.

TRAVEL ON COMMERCIAL RAILWAYS.

387.[1] "In time of war or threatened war preference and precedence shall, upon the demand of the President of the United States, be given, over all other traffic, to the transportation of troops and matériel of war, and carriers shall adopt every means within their control to facilitate and expedite the military traffic."

388. The movement of troops and their equipment over commercial railways is the function of the Quartermaster Corps, who plan and prepare for the move in conformity with regulations and orders from competent authority.

389. Orders covering such movements should give an exact return of the command, and transportation will be furnished at the rate of 3 men to each section in tourist sleepers, or 3 men to each two seats in day coaches. When day coaches are used for journeys of over 24 hours' duration, if practicable a seat will be provided for each man.

390. Whenever organizations are moved by rail, with their animals, equipment, and materiel, it is desirable that complete units be kept together in trains divided into convenient train sections. It is preferable to have trains of moderate size with good speed rather than long trains with low speed.

If it is necessary to divide a train, some officers and men will accompany each section. The troops should not be separated from the animals if it can be avoided; but if the animals are shipped in separate sections selected detachments under officers accompany them, and such sections will precede the troops.

---

[1] Extract from Chap. 3591, Part 1, Vol. XXXIV, Statutes at Large of the United States of America.

391. When supplies are shipped to mobilization or concentration camps, the contents of each car will be marked or placarded on the outside of the car, and the latter, when practicable, is also marked with the name of the organization to which the supplies are sent.

392. Preparation of Cars.—Upon receipt of orders for the movement of troops by rail, the officer charged with supplying the transportation arranges with the railroad authorities for the necessary cars. He procures lists, with weights, of all property to be shipped and makes out the bills of lading, provides loading facilities and material for blocking and lashing, and constructs the necessary ramps.

Upon arrival of the cars, he inspects to see if they conform to the terms of the contract, and reports the result of his inspection to the commander.

Stock cars are inspected with especial care to see that they are in good order throughout. Projecting nails, bolts, and splinters, loose boards and rotten flooring, broken fixtures on hayracks, doors, or troughs, are sources of danger or discomfort to the animals and of loss to the Government. The cars should be clean before loading, and suitable noninflammable footing be provided.

Passenger cars must be clean, fully supplied with water and ice, and sufficiently lighted and heated. The urinals and closets must be in good condition, well supplied with water and toilet paper, and the sleeping accommodations must be according to contract.

After the cars have been accepted, the number of men allotted to each is marked on the side or steps. The cars are then assigned to organizations and plainly marked.

393. Loading and Entraining.—At the proper time loading is begun and is carried on, usually by the troops, pursuant to the orders of the commander Heavy property may be loaded by details before the arrival of the troops.

Artillery and other carriages are made secure by lashings and by nailing blocks of wood to the flooring under the wheels.

The arrival of troops at the station should be timed so that there will be no delay in waiting for cars. When the barrack, camp, or bivouac is not more than a mile from the station, troops are not required to fall in until notice has been received that the cars are at the station and have been inspected and assigned. The command is then marched to the train and the property and animals loaded. The organizations are then marched opposite their cars and entrained. The cars are entered simultaneously, each company commander distributing his men according to the assignment. Noncommissioned officers have seats near the doors.

Troops traveling by train in time of peace seldom require their arms or all of their equipment. For instance, when sleepers are provided they generally require no equipment other than their canteens and haversacks, the mess kits and necessary toilet articles being carried in the latter. For mounted troops the saddlebags take the place of haversacks. A few revolvers or rifles suffice for the necessary guard duty. Therefore, to add to the comfort of the men, train commanders may cause the arms and equipments not required en route to be properly secured and stored in a property or baggage car.

Mounted troops dismount upon arrival and remove the horse equipments, except the halter. Each man's equipment, except halter, canteen, and saddlebags, is then securely tied in a gunny sack, or other suitable receptacle, marked with the number of the man and letter of his troop, and loaded in the proper car. Each troop, except the horse holders, is then marched to its cars where the men deposit their arms (if not otherwise disposed of), canteens, and saddlebags. It then marches back, relieves the horse holders, and loads the horses. The horse holders, unless otherwise ordered, repair to their cars, carrying their arms (if left with them), canteens, and saddlebags. For short journeys the horses may be loaded saddled (stirrups crossed) and bridled, or the bridles may be tied on the saddles.

In the field artillery a similar method is pursued. The harness is usually tied up in sets, plainly marked, and loaded in a box car

Animals can be conveniently loaded through chutes of stockyards, or from freight platforms level with the car floors. In other cases portable or improvised ramps will have to be used. When it is likely that the animals will have to be unloaded at places without facilities, one or more portable ramps, or the material for improvising them, should be carried on the train. The loading should proceed without noise or confusion, the animals being led quietly to the car door and turned over to the four men, two for each end, who do the loading. The animals should be packed as closely as possible, except in very hot weather Halters are not removed. Gentle animals should be placed opposite the doors, and are therefore loaded last. Alternate animals should face in opposite directions.

394. The time required for loading each train depends upon the railroad facilities and upon the experience of the troops. For troops leaving station to go into the field, or changing station in the field, the time required should not exceed—

One hour for infantry
One and one-half hours for cavalry and light artillery.
Two hours for heavy artillery and for engineers with bridge train.

395. All movements of the troops in loading, entraining, and detraining, feeding and watering, and exercising men and horses are made, as a rule, in military formation and pursuant to command, thus avoiding confusion and saving time.

396. Conduct of the Troops.—Delays caused by the troops, whether in loading and entraining or during the journey, are inexcusable. They interfere with railroad schedules and are a source of great annoyance.

The commander is the sole intermediary between the troops and the railroad personnel. In case of deficiencies and other matters requiring correction, he addresses himself to the official in charge only.

The senior noncommissioned officer in each car is responsible for cleanliness and good order Spitting on the floors, defacing woodwork and windows, and every species of disorder must be prevented.

The commander may station sentinels at the doors of each car to prevent the entrance of unauthorized persons and to keep soldiers from riding on the steps, platforms, or tops of cars, and from leaving without permission If it is desirable to exercise the troops, they should leave the cars in a body, under their officers.

Smoking is prohibited in cars loaded with animals or forage.

397 In movements by rail kitchen cars are provided, if practicable, otherwise, baggage cars are fitted up by the troops or arrangements are made for procuring meals, or at least liquid coffee, at stations en route

Careful attention is paid to the messing of the men, whether in kitchen cars or in the coaches where the men ride A mess officer supervises the preparation and serving of the meals and requires the men to keep their mess kits scrupulously clean.

398 When the stock cars provided are such that the animals can be fed and watered on the trains, it is unnecessary to unload them for exercise or recuperation unless the weather is very hot and the journey long.

399. On account of danger from fire, neither hay nor straw is carried in stock cars. A short ration of grain (about 6 pounds) is sufficient to supply animals while traveling by rail.

400. On occasions when troops have been allowed or required to leave the train for exercise or duty, the commander will cause the "assembly" to be sounded five minutes before departure.

401. Detraining and Unloading.—The train schedule is arranged, when practicable, for arrival at destination in the morning. The troops are notified in time to prepare for detraining.

The officers and guard are the first to leave the cars. The commander meets the staff officer sent to the train, receives instructions, if any, gets his bearing, and orders the troops to detrain. As soon as the passenger coaches or sleeping cars are empty, the quartermaster, or a specially designated officer, accompanied by the conductor, if practicable, makes an inspection of the cars and notes their condition; the result is reported to the commander.

The troops procure their field kits and march to camp without delay, leaving suitable details to unload and bring up the property If the camp is distant, arms are stacked and a part or all of the command unloads the train

In the cavalry the men are marched to the vicinity of the stock cars, where the saddlebags and canteens are placed in line on the ground, under guard. The remaining articles of the field kit and horse equipments are then unloaded and placed with the preceding articles. The horses are then unloaded, saddled, and the troops formed.

Animals are unloaded quietly, each one being led to the opening so that his body will be athwart the car before leaving it.

The command may be marched to camp at once, if near the station; otherwise, picket lines are stretched, or the horses are held while the property is unloaded.

Artillery unloads in a manner similar to that of cavalry.

402. On account of accidents, freight blockades, or action of the enemy, it may be necessary to unload in the open country. In such cases portable or improvised ramps will have to be used. Lacking these, the train may be stopped in a low cut, and crossties, baled hay, car doors, and turf utilized for the rapid construction of ramps of sufficient height to permit unloading of animals.

TRAVEL ON MILITARY RAILWAYS.

403. Method of Requisitioning for Railway Transportation.—Requisitions should reach the military controlling staff as early as possible and should give concise data as to the number of officers and men, animals, guns, vehicles, and supplies that will be involved in the movement. After the program for the movement has been settled, changes should be avoided as far as practicable

404. The authority consigning animals or matériel for shipment will be responsible for loading them and for furnishing attendance and forage for the animals while en route. Ordinary shipments of supplies or matériel will be turned over to the railway authorities and will be shipped on an ordinary bill of lading. Important shipments may be accompanied by a representative of the department interested, and by a representative of the operating department.

405. The commander of the line of communications will issue regulations concerning movements of military and civil passengers over the military railways If necessary to the enforcement of these regulations military police of the service of defense will be placed on duty on trains and at stations for this purpose

406. Hospital Trains.—Hospital trains will be fitted up on each line of military railway The necessary sanitary personnel and special equipment will be supplied from the base section of the supply, sanitary and telegraph services of the line of communications. As far as practicable such trains, or other trains carrying sick and wounded who can travel sitting up, will leave the railhead at certain fixed hours daily

In anticipation of an engagement, rolling stock for special hospital trains will be collected and fitted up by the director of railways at suitable points to meet the probable needs. At stations where sick and wounded are to be entrained and detrained, rest stations will be organized, under instructions from the commander of the line of communications, by the supply, sanitary, and telegraph services of the line of communications.

407. Troop Movements by Rail.—In so far as may be practicable, troops will be moved on a military railway in the same manner as on a commercial railway, and the general principles given in Travel on Commercial Railways will be followed; but such conditions will not usually obtain, and troops will often have to be moved in freight equipment or packed into day coaches far in excess of the numbers given for peace movements. Rapidity of movement and economy of rolling stock will take precedence over the comfort of the troops whenever necessary

408. Troops in the theater of operations carry with them on railway trains only such supplies, equipment, etc., as can be promptly moved away with the troops at the detraining station, or, in other words, that which is authorized to be carried on the men and animals, and in the combat and field trains.

When large bodies of troops are moved by rail, staff officers, with representatives of the various units and departments, should precede the troops to the destination, in order to make arrangements to receive the troops, and insure their prompt movement away from the detraining point.

409. In drawing up orders for the movement of troops by rail, the following points should be clearly stated:

(*a*) Date, place of entraining, destination, route to be followed.
(*b*) Hours of departure of trains; time at which troops should reach the entraining place, route that they should follow.
(*c*) Details in regard to feeding of troops, and watering and feeding animals en route.
(*d*) Places of assembly near entraining and detraining stations.
(*e*) Schedule showing assignment of troops, animals, and vehicles to different trains.

Troops will not occupy railway buildings or use the railway facilities or property without authority from the railway staff officers.

410. Duties of a Commander of a Troop Train.—An officer from each unit, supplied with a copy of the order directing the movement and a field return of the troops involved, should be sent ahead to the entraining point to ascertain from the railway staff officer the arrangements for the entraining of his unit. He will communicate his information to his commander before the troops reach the station, and will then act as guide to the unit in reaching its trains. The commander of troops to be moved by rail will retain the original copy of his order.

The senior officer on every special troop train is responsible that order is maintained, and will furnish the railway operatives the necessary force to carry out the regulations. He will detail a guard on every troop train to take charge of prisoners, property, etc., and to furnish sentries, as required, at entraining and detraining points, and at stations en route. He is responsible that the regulations of the railway service are observed. Except when necessary, on account of actual or threatened attack by the enemy, he will not interfere with the working of the railway service. If an attack is anticipated, an officer should ride on the locomotive to inform the engineer when, for tactical reasons, it is desirable to stop the train.

Article VII.

MILITARY POLICE.

411. The duty of military police is to enforce all police regulations in the theater of operations and in mobilization and concentration camps. They protect the inhabitants of the country from pillage and violence and prevent excesses of all kinds; keep all roads clear; arrest all soldiers and civilian employees absent without proper authority from their organizations; arrest all marauders, and collect all stragglers and hand them over to their organizations. They keep a list and description of all camp retainers and followers and watch their conduct. They are charged with relieving organizations from the care of prisoners of war and with their safe conduct to places where they are ordered assembled

They police all railroad stations, public houses, depots, and public buildings, protect telegraph and telephone lines and railways from damage; keep hostile inhabitants in order, carry out their disarmament, and prevent spying.

412. With the division, the commander of trains and the force under his orders, exercise the functions of military police.

413. On the line of communications the commanders of defense districts exercise these functions, following up closely the advance of the division, taking over all prisoners of war, and performing the military police duties in rear of the zone policed by the commander of trains.

414. The defense commander of the area in and about the base of a line of communications is assigned as provost marshal. The functions of a provost marshal, in addition to those of general military police, are to receive and hold all classes of prisoners. He makes records of the prisoners of war, and collects and records the tags taken from the enemy's dead, as required by the laws and usages of war The records of prisoners of war and of the enemy's dead are transmitted quarterly to the War Department.

415. In mobilization and concentration camps the powers of military police are ordinarily exercised by the commander of trains, though if conditions require, an officer may be assigned as commander of military police.

416. In cases of emergency the military police may call on any troop to assist them. All persons belonging to the military service are required to give every assistance to the military police in the execution of their duties.

417. Officers and enlisted men when actually performing the duty of military police will wear a blue brassard on the left arm half way between the elbow and shoulder bearing the letters "M. P." in white.

418. As a rule, military police on duty will not be reprimanded or placed in arrest except by the superiors under whose command they happen to be. In exceptional cases field officers and officers of higher grades are authorized to order their arrest. Members of the military police when not on duty—that is, when not wearing the blue brassard—have no special privileges.

Article VIII.

CENSORSHIP.

419. Censorship within the theater of operations is controlled by the commander of the field forces. An officer is assigned as censor and is provided with such assistants as necessary. He performs his duties under the immediate orders of the chief of staff of the commander of the field forces.

420. Censorship includes (1) censorship over private communications and (2) censorship over press publications and communications.

All private communications (post cards, letters, parcels, telegrams, etc.) of officers, soldiers, foreign attachés, newspaper correspondents, and all other individuals, dispatched from the theater of operations are liable to censorship and to such delay in transmission as may be deemed necessary by the military authorities A censor is authorized to suppress any statement which might be of value to the enemy or prejudicial to the welfare of the forces in the field

All newspapers or journals in the theater of operations or in localities where martial law is in force are subject to censorship and, if necessary, their publications may be suppressed

421. The press has public functions to perform with respect to the collection and dissemination of news concerning the operations of the Army in time of war The dissemination of falsehoods or distortion of facts, no less than the premature disclosure of movements or plans, is so fraught with dangerous consequences that the greatest care should be observed in its prevention. The press occupies a dual and delicate position, being under the necessity of truthfully disclosing to the people the facts concerning the operations of the Army and, at the same time, of refraining from disclosing those things which, though true, would be disastrous if known to the enemy. It is perfectly apparent to everyone who considers the question that these important functions can not be trusted to irresponsible people and can only be properly performed under reasonable rules and regulations with respect thereto.

CORRESPONDENTS.

422. Conditions of Acceptance.—Each applicant shall present to the Secretary of War credentials from the owner or owners, managing editor, or responsible manager of the publication or publications he represents, giving a brief account of his career, stating exactly the nature of the work he is expected to do at the front, certifying to his trustworthiness as working member of his profession, and his personal fitness to accompany the army His employer or employers shall give a bond for his good conduct in the field, which, in case of the withdrawal of his pass for infraction of any of the regulations shall be forfeited to any charity which the Secretary of War may name. He shall take an oath of loyalty of the usual military form and shall agree to abide in letter and spirit by all the regulations laid down for his guidance. If at any time the number of correspondents becomes so large as to be an encumbrance, the Secretary of War will refuse other passes until such time as he deems expedient; when other applicants who fulfill the conditions will be received in the order of their application.

Not more than one correspondent will be received for any one publication or syndicate of publications or press association with the same field army Men who have evidently secured credentials with a view to adventure rather than serious work as correspondents will not be received. Their employers must show that they have been working members of their profession In addition to the requirements for home correspondents, a foreign correspondent must have served in other campaigns, present credentials as to his character from high officers of the army to which he was attached and accompanying the letter from his employers must present a letter from his ambassador in Washington, personally vouching for him.

423. Photographs and Photographers.—An official photographer will accompany each field army or other important independent field force. His films and plates will be sent promptly to Washington, where prints will be issued at a nominal cost to the press. No professional photographers and moving-picture men will be received. No news or professional photographers will be received if representing themselves either as news or mail correspondents. The regular correspondents may carry small hand film cameras. The films will be sent by the censor at the headquarters of the field force to the chief censor's office in Washington, where they will be developed and such of them as pass the censorship sent to any given address promptly.

424. Censorship of Press Matter.—A commissioned officer of journalistic experience shall act as chief censor in Washington and one shall be attached as censor to the headquarters of each field army or other important independent field force. All correspondent's news, or private dispatches, mail letters for publication, private letters, drawings and photographs must be submitted to this censor and receive his stamp before being sent. After censorship he will show the correspondent what, if anything, he has elided from correspondent's MSS. He will permit the use of no code words in any private or public communication. He may request a correspondent to rewrite any portion of a dispatch that he may suspect of double meaning without accompanying his request with his reasons for it. The correspondent will not be allowed to send information concerning the occupation or relinquishment of a position, the news of any victory or defeat, the names of organizations or commanders, the dispositions of troops, the state of supply or transport, the number of sick, the extent of losses, or any other matters of information unless the dispatch or report, containing such information, is passed on and authorized by the censor. Any relaxation in the regulations will rest with the commanding general of the field force. Nothing in these regulations is to be construed as limiting the correspondent's freedom of opinion once there ceases to be a necessity for military secrecy; the sole object of the regulations being to keep information from the enemy at a time when it might be of service to him.

425. Facilities for Work.—Immediately on receiving his pass the correspondent shall proceed to the headquarters of the field force to which he is assigned and there report himself to the censor. His pass shall give him transport over all military railways, with the privileges of a commissioned officer. All correspondents will be officially attached to headquarters of field armies or other important field forces. Their transport shall have a place with that of the baggage section of the field train of the headquarters staff. No one except the censor at headquarters shall have the authority of censorship. Correspondents shall have the freedom of the lines of information of the army within such limitations as the censor may, from time to time, indicate. The official army wires shall be open to the correspondents' dispatches when not occupied by official dispatches. Correspondents' dispatches will be sent in the order of filing. The censor may limit the number of words or otherwise make an equitable adjustment of the use of the wire among the different correspondents when the wire is unequal to carrying all the dispatches submitted. Within the censor's discretion, correspondents may send messengers to carry censored dispatches to better wire facilities than those at the immediate front.

426. Messengers.—Any correspondent who chooses may have a mounted messenger, who may send neither correspondence nor photographs of his own. Any infraction of the regulations by the messenger will be equivalent to an infraction by the correspondent himself. He must have credentials acceptable to the army and a pass in the correspondents' form, with the privilege of an enlisted man. A similar bond shall be required for him as for the correspondent. Except where permission is given by the headquarters censor, he must remain with the correspondents' transport.

427. Passes.—Every correspondent shall be supplied with an official pass, bearing his photograph and his own signature and the signature of the Secretary of War and the commander of the field forces to which he is attached. He shall show this upon the demand of any field officer, company commander, or member of the military police, and shall respect their requests under the penalty of being sent back to army headquarters under guard.

428. Garb.—Every correspondent shall provide himself with olive-drab garb for the field. He shall wear no accouterments not of a neutral tint. He shall be supplied with a white brassard 2½ inches in width, bearing the letter C in red, to be worn on the left arm, in order that his status with the army may be known at a glance by both officers and privates. Messengers shall observe the same regulations about garb, with the exception that their brassard shall bear the letter M.

429. Discipline.—No correspondent shall leave the army to which he is attached, either to go home or for any other purpose, except by permission of the War Department. A correspondent shall be suspended from all privileges for the distortion of his dispatches in the office of the publication which he represents, and also for the use of language or expressions conveying a hidden meaning which would tend to mislead or deceive the censor or permit the approval by him of otherwise objectionable dispatches or for any other infraction of these regulations in letter or in spirit. In extreme cases of offense, where the commanding general thinks it justified, the correspondent may be sent to the rear and held under arrest until such time as the War Department may restore his privileges or give him a pass to leave the army.

430. Medical Regulations.—Correspondents shall submit to the army medical regulations in the field.

431. Press Regulations for Officers, Enlisted Men, and Civilian Employees of the Army.—No officer, enlisted man, or civilian employee of the army shall be permitted to correspond for any publication without the consent of the Secretary of War and the majority of the correspondents attached to the field army in which he serves. No censor or censor's assistant may write anything about the campaign for publication while he holds a commission in the army

Article IX.

FIELD POST OFFICE.

432. Arrangements are made with the Post Office Department for establishing and maintaining a postal service in the theater of operations.

This service is directed by an official of the Post Office Department who is stationed at the base of the line of communications. This official cooperates with the assistant chief of staff of the supply, sanitary, and telegraph service of the line of communications, maintaining post offices, agents, etc., with its advance section, and so far as practicable, throughout the zone of the line of communications. In addition to the foregoing a post-office agent accompanies each division, being supplied by the quartermaster corps with the necessary vehicles and animals for the prompt dispatch and distribution of mails.

The commander of trains is responsible for the protection of the postal personnel with divisions and controls their movements.

The necessary instructions relative to the distribution and receipt of mail are issued by the division commander.

APPENDICES.

USEFUL INFORMATION.

Appendix 1.

A. WAR STRENGTH, IN ROUND NUMBERS, ROAD SPACE, AND DIMENSIONS OF CAMPS.

Units.	War strength, in round numbers.		Vehicles, including guns.	Length of columns.			Contracted camping space (troops and trains).	
	Men.	Animals (horses and mules).		Organizations, including combat trains.	+Field trains without distance.	Ammunition, supply, sanitary, and engineer trains.	Yards.	Approximate number of acres.
Divisions:								
Infantry	22,000	7,500	900	10.3 mis.	11.8 mis.	3.6 mis.	....	180
Cavalry	10,000	12,000	500	8.0 mis.	9.5 mis.	1.5 mis.	....	150
Brigades:								
Infantry	5,500	520	67	1.7 mis.	2.0 mis.	....	....	19
Cavalry	2,500	2,900	53	1.5 mis.	1.9 mis.	....	....	18
Artillery	2,300	2,300	257	[1] 2.6 mis.	2.9 mis.	....	....	30
Smaller units (including attached sanitary troops):				*Yards.*	*Yards.*	*Yards.*		
Infantry regiment	1,860	170	22	970	1,150	....	160 by 180	6.2
Cavalry regiment	1,250	1,430	26	1,310	1,640	....	200 by 200	8.2
Field artillery, light, regiment	1,150	1,150	128	[2] 2,240	2,500	....	240 by 300	14.7
Field artillery, horse, regiment	1,150	1,560	131	2,670	2,970	....	240 by 400	19.6
Field artillery, heavy, regiment	1,240	1,340	131	2,510	2,800	....	260 by 300	16.0
Field artillery, mountain, regiment	1,100	1,160	....	1,770	2,070	....	80 by 380	6.2
Engineers, pioneer battalion	490	160	12	410	470	....	50 by 200	2.0
Engineers, pioneer battalion (mounted)	270	370	11	350	440	....	50 by 260	2.6

Engineers, pontoon battalion	500	820	145	3,360	3,480	....	160 by 315	10.0
Signal troops, field battalion	160	200	15	310	370	....	30 by 240	1.7
Signal troops, field (cavalry), battalion	170	200	11	240	300	....	30 by 210	1.3
Signal troops, aero squadron (including landing place 150 yards by 350 yards)	90	....	16	140	200	....	175 by 350	12.5
Trains:								
Infantry division—								
Ammunition	260	750	162	....	....	2,440	75 by 380	5.8
Supply	190	630	126	....	....	2,000	80 by 380	6.2
Sanitary[3]	530	500	90	....	....	1,530	100 by 260	5.3
Engineer	10	40	9	....	....	150	20 by 140	.6
Cavalry division—								
Ammunition	60	140	33	....	....	500	30 by 200	1.2
Supply	220	860	75	....	....	1,200	80 by 280	4.6
Sanitary	300	300	53	....	....	890	50 by 260	2.7

[1] Combat train 1 mile long.

[2] Combat train 840 yards long.

[3] Contracted camping space permits pitching the tents and operation of field hospitals.

This table is based upon the road spaces occupied by troops at war strength, infantry in column of squads, cavalry in column of fours, artillery and trains in single column.

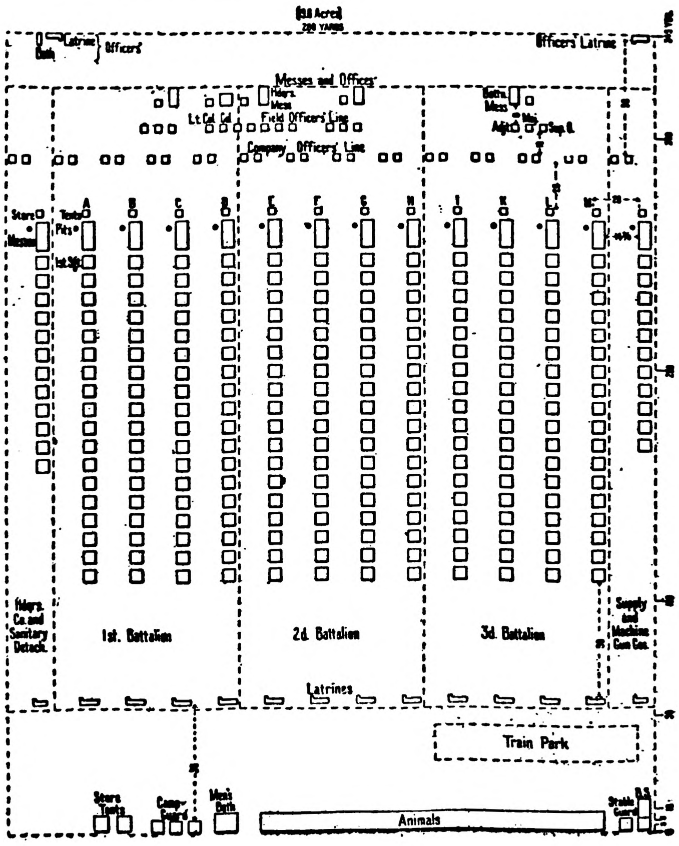
The spaces differ but little from the requirements of drill regulations. On the march, after a command is straightened out on the road, elongation always takes place. In calculating the length of a column further allowance must, therefore, be made in accordance with circumstances—sometimes as much as 25 per cent.

The contracted camping spaces afford sufficient room for a one-night halt. They require that the animals and vehicles of a single troop, battery, or company be placed on the same line with the men where practicable to do so within the camp lengths above given; that the men be in double shelter tents (or in double row of shelter tents), and that the lines on which adjacent companies are established be separated by distances not exceeding 11 yards for infantry and other dismounted organizations, double carriage length for field artillery (except mountain), and 12 yards for cavalry and remaining mounted organizations. Latrines are placed on the opposite side of camp from company kitchens and at a minimum distance of 50 yards from the men.

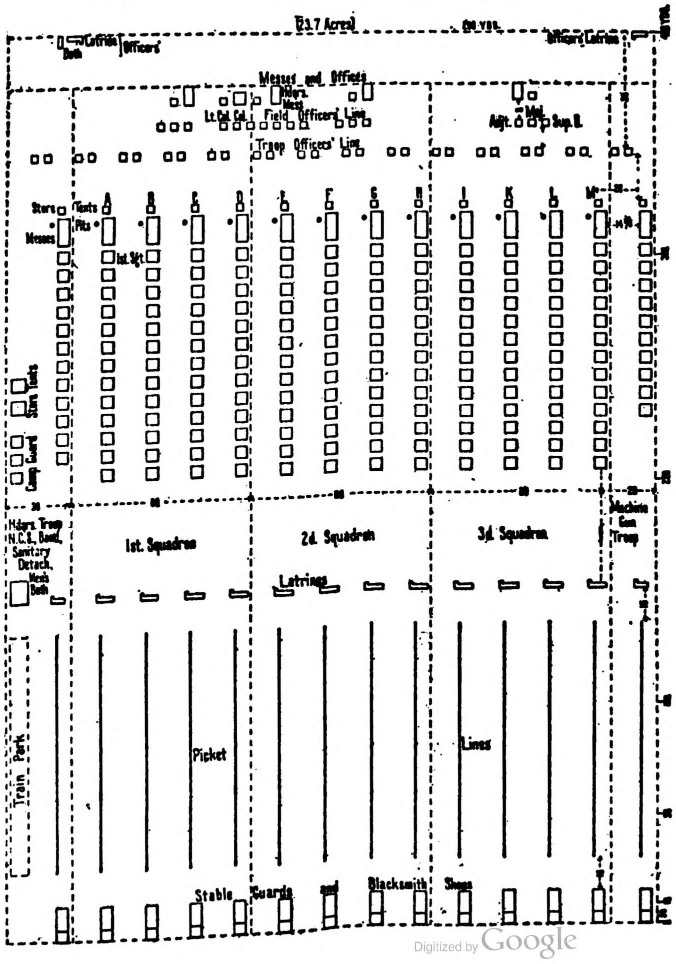
The camp areas given represent minimum requirements under favorable conditions of terrain and should be increased whenever practicable, particularly for sanitary reasons in those cases where a camp is to be occupied for more than one day.

For approximate calculations, assume 1,600 meters=1 mile; 5 miles=8 kilometers; the number of acres in a rectangular tract=the product of one-seventieth of the length in yards by one-seventieth of the width in yards.

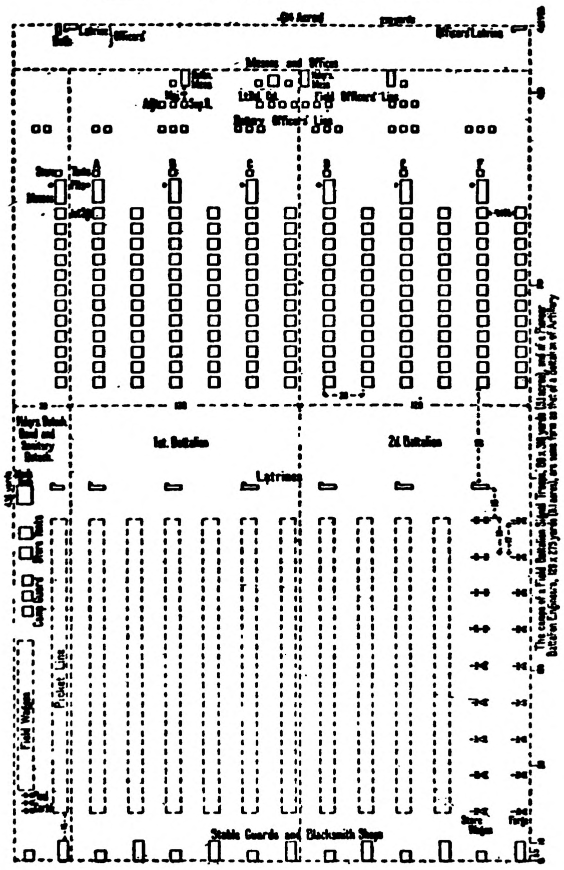
CAMP OF A REGIMENT OF INFANTRY. WAR STRENGTH.


(3.8 Acres)
200 YARDS
Bath
Latrine
Officers'
Officers' Latrine
Messes and Offices
Hdqrs. Mess
Lt. Col. Col.
Field Officers' Line
Batn. Mess
Maj.
Adjt.
Sup. O.
Company Officers' Line
A
B
C
D
E
F
G
H
I
K
L
M
Store
Mess
Tents
Pits
1st. Sgt.
Hdqrs. Co. and Sanitary Detach.
1st. Battalion
2d. Battalion
3d. Battalion
Supply and Machine Gun Cos.
Latrines
Train Park
Store Tents
Camp-Guard
Men's Bath
Animals
Stable Guard
B.S.

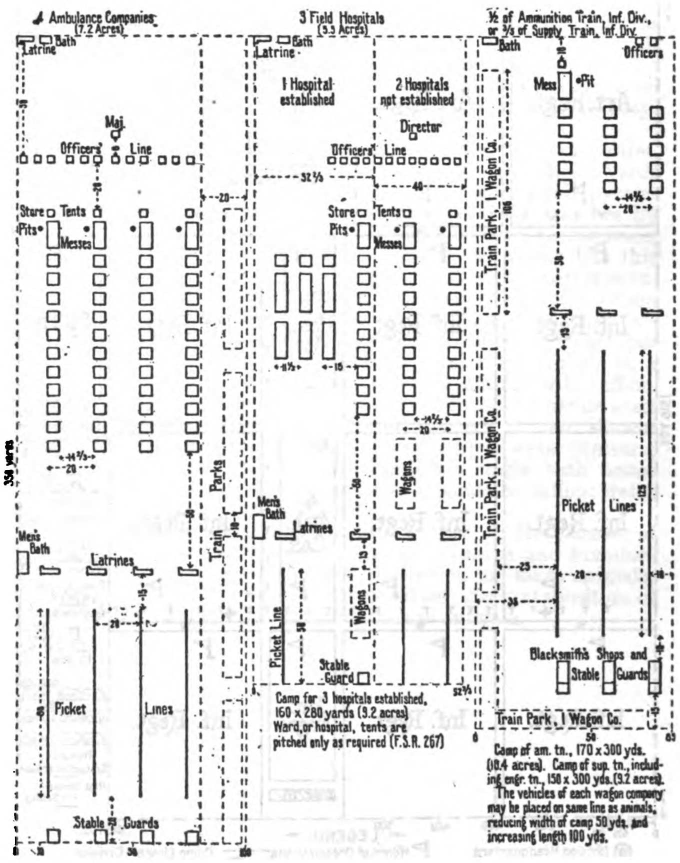
CAMP OF A REGIMENT OF CAVALRY. WAR STRENGTH.


(23.7 Acres)
200 yds.
Bath
Latrine
Officers'
Officers' Latrine
Messes and Offices
Hdqrs. Mess
Lt. Col.
Col.
Field Officers' Line
Maj.
Adjt.
Sup. B.
Troop Officers' Line
Stores
Tents
Pits
Messes
A
B
C
D
E
F
G
H
I
K
L
M
1st. Sgt.
Stom. Tents
Camp Guard
Hdqrs. Troop
N.C.S., Band,
Sanitary Detach.
Men's Bath
1st. Squadron
2d. Squadron
3d. Squadron
Machine Gun Troop
Latrines
Train Park
Picket
Lines
Stable
Guards
and
Blacksmith
Shops

CAMP OF A REGIMENT OF ARTILLERY.


Officers' Latrine
Messes and Offices
Field Officers' Line
Battery Officers' Line
A
B
C
D
E
F
1st. Battalion
2d. Battalion
Latrines
Picket Line
Field Wagons
Camp Guard
Store Tents
Store Wagon
Forge
Stable Guards and Blacksmith Shops

CAMPS OF TRAINS. WAR STRENGTH.


4 Ambulance Companies.
(7.2 Acres)
Latrine
Bath
30
Maj.
Officers' Line
20
Store
Tents
Pits
Messes
14⅔
20
354 yards
Mess
Bath
Latrines
15
20
50
Picket
Lines
Stable
Guards
0
10
50
80
20
Train
Parks
10
3 Field Hospitals
(5.5 Acres)
Latrine
Bath
1 Hospital established
2 Hospitals not established
Director
Officers' Line
32⅔
40
Store
Tents
Pits
Messes
14⅔
15
20
Wagons
Mess
Bath
Latrines
50
13
Wagons
Picket Line
58
Stable Guard
0
52⅔
½ of Ammunition Train, Inf. Div.,
or ⅔ of Supply Train, Inf. Div.
Bath
Officers
10
Mess
Pit
14⅔
20
58
13
Train Park, 1 Wagon Co.
106
Train Park, 1 Wagon Co.
Picket Lines
125
25
20
10
36
Blacksmith's Shops and
Stable
Guards
10
Train Park, 1 Wagon Co.
0
50
63

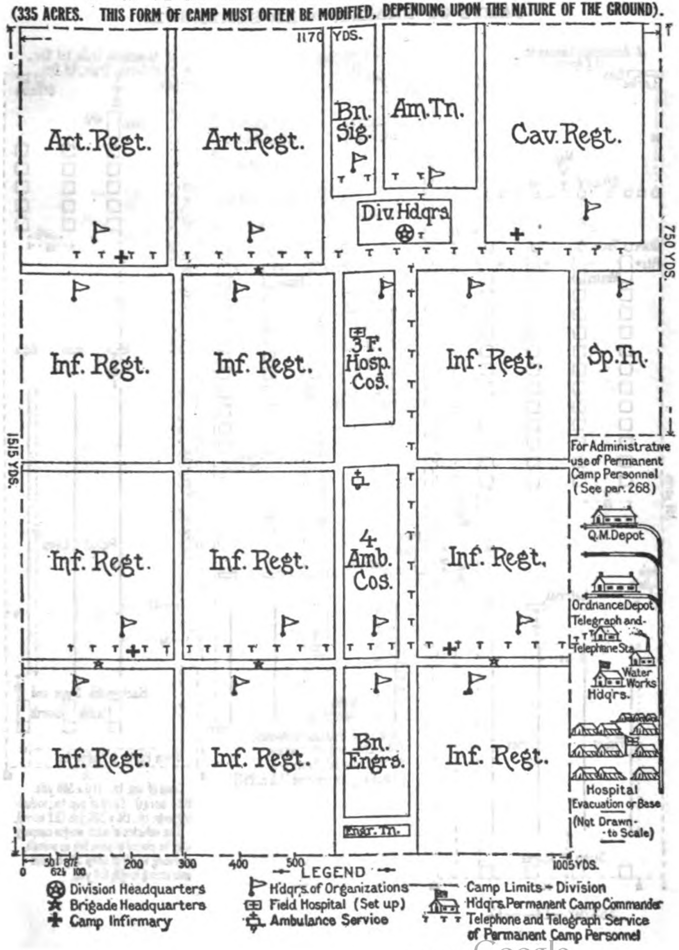
Camp for 3 hospitals established, 160 x 280 yards (9.2 acres). Ward, or hospital, tents are pitched only as required (F.S.R. 267)

Camp of am. tn., 170 x 300 yds. (10.4 acres). Camp of sup. tn., including engr. tn., 150 x 300 yds. (9.2 acres).

The vehicles of each wagon company may be placed on same line as animals, reducing width of camp 50 yds. and increasing length 100 yds.

CAMP OF INFANTRY DIVISION. WAR STRENGTH.

(335 ACRES. THIS FORM OF CAMP MUST OFTEN BE MODIFIED, DEPENDING UPON THE NATURE OF THE GROUND).


1170 YDS.
Art. Regt.
Art. Regt.
Bn. Sig.
Am. Tn.
Cav. Regt.
Div. Hdqrs
750 YDS.
Inf. Regt.
Inf. Regt.
3 F. Hosp. Cos.
Inf. Regt.
Sp. Tn.
1515 YDS.
For Administrative use of Permanent Camp Personnel (See par. 268)
Inf. Regt.
Inf. Regt.
4 Amb. Cos.
Inf. Regt.
Q.M. Depot
Ordnance Depot
Telegraph and Telephone Sta.
Water Works
Hdqrs.
Inf. Regt.
Inf. Regt.
Bn. Engrs.
Engr. Tn.
Inf. Regt.
Hospital
Evacuation or Base
(Not Drawn to Scale)
0
50
62½
87½
100
200
300
400
500
1005 YDS.
LEGEND
Division Headquarters
Brigade Headquarters
Camp Infirmary
Hdqrs. of Organizations
Field Hospital (Set up)
Ambulance Service
Camp Limits — Division
Hdqrs. Permanent Camp Commander
Telephone and Telegraph Service of Permanent Camp Personnel

While the preceding diagrams are of semipermanent camps using canvas as shelter, a similar arrangement is observed in more permanent camps, such as mobilization, in which the canvas is replaced by temporary structures. The distances and intervals given are the maximum to be used unless the topography of the camp site demands an increase. They should frequently be reduced, as indicated below, to economize in guard and police duty, and in the labor of constructing camps.

Battalions and squadrons usually camp in column of companies. Between adjacent tents, center to center, in a row, allow 8 yards for large pyramidal (16 by 16 feet), 5 or 6 yards for small pyramidal (9 by 9 feet), and 10 yards for storage (17 feet 10 inches by 20 feet 5 inches). Between adjacent company rows, picket lines, and gun or carriage parks, center to center, 20 yards; but this distance may be reduced. From latrines 50 yards to nearest occupied tent; but, when a smaller camp is desired, the space between company latrines and the men's tents may be used to park carriages and animals. For picket lines and parks, allow 1 yard per animal and 4 yards per vehicle; but, for shelter for animals in a double row, 2½ lineal feet of structure per animal will suffice. Other distances shown in diagrams may be reduced. Latrine seats are provided at the rate of 1 seat to about every 10 men; shower heads at 1 to every 50 to 100 men, depending upon water pressure; 1 bath house for officers and 1 for men (or a single bath house suitably partitioned) in each regiment or separate battalion; water spigots at the rate of 1 for each mess.

No fixed type of camp is prescribed for use in the theater of operations. In the presence of the enemy, camps and bivouacs must be modified to afford the best protection for men, animals, and trains. This will frequently necessitate the juxtaposition of shelter for the men and picket lines for the animals.

Appendix 2.

Types of Field Intrenchments.

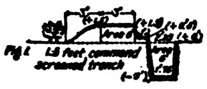


Fig. 1. 1.5 foot command screened trench

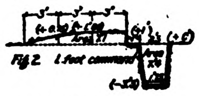


Fig. 2. 1 foot command

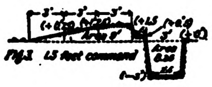

3'
3'
3'
(+1.5)
Area
8.25

Fig. 3. 1.5 foot command

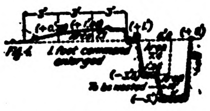

3'
3'
3'
Area
To be roofed

Fig. 4. 1 foot command enlarged

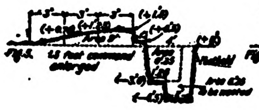

3'
3'
3'
Area
Area
To be roofed

Fig. 5. 1.5 foot command enlarged

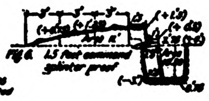


Fig. 6. 1.5 foot command splinter proof

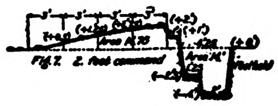

3'
3'
3'
3'
(+2)
(+1)
Area
Area

Fig. 7. 2. foot command

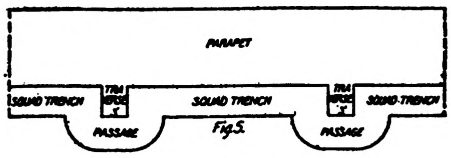
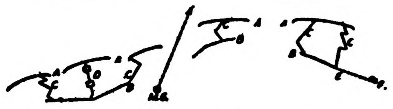

PARAPET
SQUAD TRENCH
TRAVERSE
SQUAD TRENCH
TRAVERSE
SQUAD-TRENCH
PASSAGE
PASSAGE

Fig. 5.


A
A
A
A
B
B
B
C
C
C
D
E
E
F
M.G.

Possible arrangement of 2 Bns. of Inf. intrenched (Regimental Reserve of 1 Bn. not shown)

A Firing trenches.
B Cover trenches.
C Communicating trench: D same traversed; E communicating way.
F Closed supporting point for flank protection
MG. Possible position for machine guns, concealed from front

Fig 8

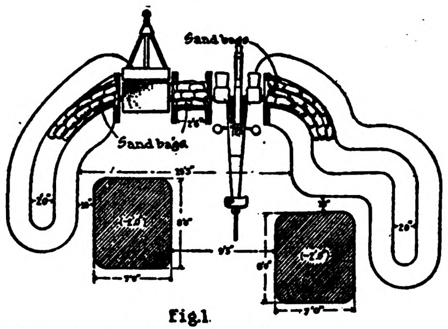

Sand bags
Sand bags
2'6"
19'3"
2'0"
10"
8'6"
9'5"
7'6"
(-2'0")
(-2'0")
2'0"
7'6"

Fig.1.

Hasty entrenchment for field artillery.
Protection against rifle fire and shrapnel.

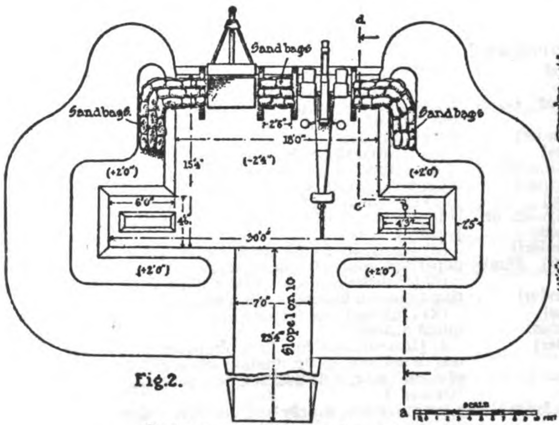

Sand bags
Sandbags
Sandbags
d
+2'6"
18'0"
15'4"
(-2'4")
(+2'0")
(+2'0")
6'0"
4'6"
c
b
4'3"
2'5"
30'0"
(+2'0")
(+2'0")
7'0"
23'4"
Slope 1 on 10
a
SCALE

Fig.2.

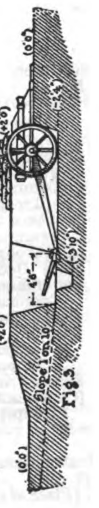

(0'0")
(-2'4")
(+2'0")
(-3'10")
4'6"
(+2'0")
Slope 1 on 10
(0'0")

Fig.3.

Deliberate entrenchment for field artillery.
Suitable type when depression is necessary for concealment.

Appendix 3.

Forms of Complete Field Orders.

While the following forms are given for the convenience of officers in the field, and with a view of securing uniformity in the service, it must be remembered that no two military situations are the same. The sequence in paragraph 3 is not obligatory, the commander arranging the details according to his best judgment.

For an advance.

Field Orders
No. —
[Reference to map used]

[Title]
[Place]
[Date and hour]

Troops

(a) Independent Cavalry:
[Commander]
[Troops]
(b) Advance Guard:
[Commander]
[Troops]
(c) Main Body—in order of march:
[Commander][1]
(d) Right [left] Flank Guard:
[Commander]
[Troops]
(e) Signal Troops:
[Commander]
[Troops]

1. [Information of enemy and of our supporting troops]

2. [Plan of commander]

3. (a) [Instructions for independent cavalry—place and time of departure, roads or country to be covered, special mission]

(b) [Instructions for advance guard—place and time of departure, or distance at which it is to precede the main body, route, special mission]

(c) [Instructions for main body—distance at which it is to follow the advance guard, or place and time of departure]

(d) [Instructions for flank guard—place and time of departure, route, special mission]

(e) [Instructions for signal troops—lines of information to be established, special mission]

(x) [Instructions for outpost—when relieved, subsequent duties]

4. [Instructions for field train—escort, distance in rear of column, or destination when different from that of main body, if disposition not previously covered in "Orders"]

[Instructions for sanitary, ammunition, supply and engineer trains when necessary]

5. [Place of commander or where messages may be sent.]

[Authentication.]

[How and to whom issued]

---

[1] If a commander is designated for the main body, his name is inserted here.

For advance guards.

Field Orders
No. —
[Reference to map used]

[Title]
[Place]
[Date and hour]

Troops

(a) Advance Cavalry:
[Commander]
[Troops]
(b) Support:
[Commander]
[Troops]
(c) Reserve—in order of march:
[Troops]
(d) Right (left) Flank Guard:
[Commander]
[Troops]

1. [Information of enemy and of our supporting troops]

2. [Plan of commander]

3. (a) [Instructions for advance cavalry—place and time of departure, roads or country to be covered, special mission]

(b) [Instructions for support—place and time of departure, route, special mission].

(c) [Instructions for reserve—distance at which it is to follow support]

(d) [Instructions for flank guard—place and time of departure, route, special mission]

4. [Instructions for field train—generally to join train of column if not previously covered in orders]

5. [Place of commander or where messages may be sent, location of lines of information]

[Authentication]

[How and to whom issued]

A halt for the night—Camp with outpost.

Field Orders
No. —
[Reference to map used]

[Title]
[Place]
[Date and hour]

1. [Information of enemy and of our supporting troops, including independent cavalry]

2. [Plan of commander—to encamp or bivouac]

3. (a) [Designation of commander and troops of outpost,[1] general line to be held, special reconnaissance, connection with other outposts, if any]

(b) [Instructions for troops not detailed for outpost duty—location of camp, designation of camp commander,[2] observation of flanks and rear when necessary, lines of information, conduct in case of attack]

4. [Instructions for field train—generally to join troops, though if near enemy, field train of outpost troops may be held in rear][3]

[Instructions for sanitary, ammunition, supply, and engineer trains, when necessary]

5. [Place of commander or where messages may be sent]

[Authentication]

[How and to whom issued]

---

[1] Where the advance guard is large the order may direct the advance guard commander to establish the outpost.

[2] Omitted when the chief exercises immediate command of the camp.

[3] May be provided for in "order" issued subsequently.

For outposts.

Field Orders
No. —
[Reference to map used]
[Title]
[Place]
[Date and hour]

Troops

(a) Advance Cavalry·
[Commander]
[Troops]
(b) Supports:[1]
No. 1. [Commander]
[Troops]
No. 2. [Commander]
[Troops]
No. 3. [Commander]
[Troops]
(c) Detached Post.
[Commander]
[Troops]
(d) Reserve:
[Commander]
[Troops]

1. [Information of enemy and of our supporting troops]

2. [Plan of commander—to establish outpost, approximate line of resistance]

3. (a) [Instructions for advance cavalry—contact with enemy, roads or country to be specially watched, special mission]

(b) [Instructions for supports—positions they are to occupy, and sections of line of resistance which they are to hold, intrenching, etc.]

(c) [Instructions for detached post—position to be occupied, duties, amount of resistance]

(d) [Instructions for reserve—location, observation of flanks, conduct in case of attack, duties of special troops]

4. [Instruction for field train if necessary]

5. [Place of commander or where messages may be sent, location of lines of information]

[Authentication]

[How and to whom issued][2]

It is sometimes necessary to issue two outpost orders; the first as above, containing general instructions; the second, issued after an inspection of the line, and containing more definite instructions or involving changes

For positions in readiness

Field Orders
No. —
[Reference to map used]
[Title]
[Place]
[Date and hour]

1. [Information of enemy and of our supporting troops]
2. [Plan of commander—to take up a position in readiness at or near —]
3. (a) [Instructions for cavalry—to reconnoiter in direction of enemy, special mission]
(b) [Instructions for artillery—position or place of assembly]
(c) [Instructions for infantry—position or place of assembly, points to be especially held, reconnaissance]
(d) [Instructions for engineers—position or place of assembly]
(e) [Instructions for signal troops—lines of information]

4. [Instructions for field trains, sanitary, ammunition, supply and engineer trains if not previously covered in orders—generally to halt at designated localities in rear, ready to move in any direction]

5. [Place of commander or where messages may be sent]

[Authentication]

[How and to whom issued]

---

[1] Numbered from the right.

[2] For small outposts it may be more convenient to write this order without a marginal distribution of troops.

For defensive positions

Field Orders [Title]
No. — [Place]
[Reference to map used] [Date and hour]

1. [Information of enemy and of our supporting troops]

2. [Plan of commander—to take up a defensive position at or along——, for the purpose of ——]

3. (a) [Instructions for artillery—position, target, intrenching, etc.]

(b) [Instructions for fighting line—division of front into sections and assignment of troops thereto, intrenching, etc.]

(c) [Instructions for reserve—troops and position]

(d) [Instructions for cavalry—usually to cover with its main force the more exposed flank, a detachment being sent to patrol the other; reconnaissance]

(e) [Instructions for engineers—defensive work, clearing field of fire, preparation of obstacles, opening roads, etc.]

(f) [Instructions for signal troops—to establish lines of information]

4. [Instructions for sanitary train—location of dressing stations and station for slightly wounded]

[Instructions for ammunition train—location of ammunition distributing stations]

[Instructions for field and supply trains, if not previously covered in orders]

5. [Place of commander or where messages may be sent]

[Authentication]

[How and to whom issued]

For an attack.

Field Orders [Title]
No. — [Place]
[Reference to map used] [Date and hour]

1. [Information of enemy and of our supporting troops]

2. [Plan of commander—indicating the general plan of attack, usually to envelop a flank]

3. (a) [Instructions for artillery—position, first target, generally hostile artillery]

(b) [Instructions for holding attack[1]—commander, troops, direction and objective]

(c) [Instructions for main attack—commander, troops, direction and objective]

(d) [Instructions for reserve—commander, troops, position]

(e) [Instructions for cavalry—generally to operate on one or both flanks, or to execute some special mission]

(f) [Instructions for engineers—any special mission]

(g) [Instructions for signal troops—to establish lines of information between the commander and the main and secondary attacks, artillery, reserves, etc.]

4. [Instructions for sanitary train—location of dressing stations and stations for slightly wounded when practicable]

[Instructions for ammunition train—location of ammunition distributing stations]

[Instructions for field and supply trains, if not previously covered in orders]

5. [Place of commander or where messages may be sent]

[Authentication]

[How and to whom issued]

NOTE.—In war it is not always possible to issue a complete attack order like the above, disposing of an entire command. In unexpected encounters, for instance, orders must be given as the situation develops.

---

[1] The term "holding attack" as used in this form is for convenience only; it is never used in actual orders, as the vigor of an attack might be lessened if the troops knew it was "holding" only.

For a retreat.

Field Orders
No.—
[Reference to map used]

[Title]
[Place]
[Date and hour]

Troops

(a) Leading Troops:
[Commander]
[Troops]
(b) Main Body—in order of march:
[Troops]
(c) Rear Guard:
[Commander]
[Troops]
(d) Right (left) Flank Guard:
[Commander]
[Troops]
(e) Signal Troops:
[Commander
[Troops]

1. [Information of enemy and of our supporting troops]

2. [Plan of commander—to retire in direction of—]

3. (a) [Instructions for leading troops—place and time of departure, route, special mission]

(b) [Instructions for main body—place and time of departure, route]

(c) [Instructions for rear guard—distance from the main body or place and time of departure, special mission]

(d) [Instructions for flank guard—place and time of departure, special mission]

(e) [Instructions for signal troops—lines of information]

(x) [Instructions for outposts—when relieved, subsequent duties—usually forming the rear guard]

4. [Instructions for field and divisional trains—place and time of departure, route, escort; these trains are generally some distance ahead of the column]

5. [Place of commander or where messages may be sent]

[Authentication]

[How and to whom issued]

For rear guards.

Field Orders
No.—
[Reference to map used]

[Title]
[Place]
[Date and hour]

Troops

(a) Reserve—in order of march:
[Troops]
(b) Support:
[Commander]
[Troops]
(c) Rear Cavalry:
[Commander]
[Troops]
(d) Right (left) Flank Guard:
[Commander]
[Troops]

1. [Information of enemy and of our supporting troops]

2. [Plan of commander—mission of rear guard]

3. (a) [Instructions for reserve—place and time of departure, or approximate distance from main body, reconnaissance]

(b) [Instructions for support—place and time of departure or distance from reserve, any special reconnaissance]

(c) [Instructions for rear cavalry—place and time of departure, road or country to be covered, special mission]

(d) [Instructions for flank guard—place and time of departure, route, special mission]

4. [Instructions for field train when necessary—usually to join train of main body]

5. [Place of commander or where messages may be sent—location of lines of information]

[Authentication]

[How and to whom issued]

MARCH TABLE.

In movements of large forces on several roads, it is sometimes desirable to prescribe the daily marches of the various columns for two or more days. In such cases the order may often be simplified by appending or incorporating a march table usually in the following form, each column providing its own security.

March Table.

——— Army, from ——— [date], to ——— [date].

[Reference to map used.]

Date.	——— Division.	——— Division.	Army Hq.
	Location of main body or of advance guard at end of each day's march, and line of march, if necessary.	Location of main body or of advance guard at end of each day's march, and line of march, if necessary.	Location at end of each day's march.

Appendix 4.

Field Maps and Sketches.

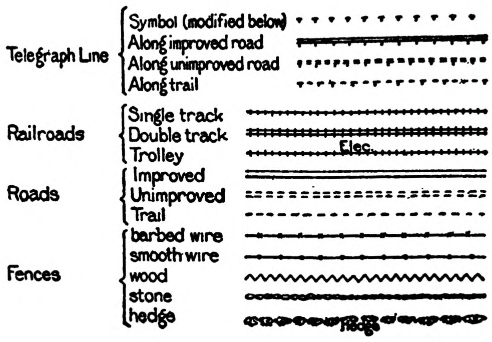
The following abbreviations and signs are authorized for use on field maps and sketches. For more elaborate map work the authorized conventional signs as given in the manual of "Conventional Signs, United States Army Maps," are used.

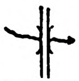
Abbreviations other than those given should not be used

ABBREVIATIONS.

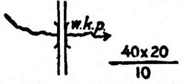
A.	Arroyo.	G. S.	General Store.	Pt.	Point.
abut.	Abutment.	gir.	Girder.	q.p.	Queen-post.
Ar.	Arch.	G. M.	Gristmill.	R.	River.
b.	Brick.	i.	Iron.	R. H.	Roundhouse.
B. S.	Blacksmith Shop.	I.	Island.	R. R.	Railroad.
bot.	Bottom.	Jc.	Junction.	S.	South.
Br.	Branch.	k.p.	King-post.	s.	Steel.
br.	Bridge.	L.	Lake.	S. H.	Schoolhouse.
C.	Cape.	Lat.	Latitude.	S. M.	Sawmill.
cem.	Cemetery.	Ldg.	Landing.	Sta.	Station.
con.	Concrete.	L. S. S.	Life-Saving Station.	st.	Stone.
cov.	Covered.	L. H.	Lighthouse	str.	Stream.
Cr.	Creek.	Long.	Longitude.	T. G.	Tollgate.
d.	Deep.	Mt.	Mountain.	Tres.	Trestle.
cul.	Culvert.	Mts.	Mountains.	tr.	Truss.
D. S.	Drug Store.	N.	North.	W. T.	Water Tank.
E.	East.	n. f.	Not fordable.	W. W.	Water Works.
Est.	Estuary.	P.	Pier.	W.	West.
f.	Fordable.	pk.	Plank.	w.	Wood.
Ft.	Fort.	P. O.	Post Office.	wd.	Wide.

SIGNS—FIELD MAPS AND SKETCHES.

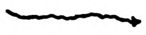

Telegraph Line
Symbol (modified below)
Along improved road
Along unimproved road
Along trail
Railroads
Single track
Double track
Trolley
Elec.
Roads
Improved
Unimproved
Trail
Fences
barbed wire
smooth wire
wood
stone
hedge
Hedge

Bridge 

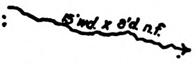
Indicate character and span by abbreviations.

Example: 

Meaning wooden kingpost bridge, 40 feet long, 20 feet wide, and 10 feet above the water

Streams 

Indicate character by abbreviations.

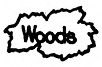
Example: 

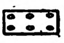
Meaning a stream 15 feet wide, 8 feet deep, and not fordable.

House •

Church

School house ▪S.H

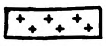
Woods 

Orchards 

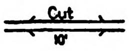
Cultivated Land [Cult.]

If boundary lines are fences they are indicated as such.

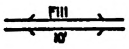
Brush, crops or grass, important as cover or forage [Brush, corn, grass, etc.]

Cemetery 

Trees, isolated • • • •

Cut and fill — 

cut 10 feet deep



fill 10 feet high

Appendix 6.

Extracts from International Conventions and Conferences.

[See Rules for Land Warfare, United States Army, for full text of conventions and conferences affecting the conduct of war, and for other rules adopted for the government of the Army of the United States in time of war. The Rules of Land Warfare give the form of certificate to be carried and the garb to be worn in certain instances by civilians authorized to accompany the Army in the theater of operations and which are necessary to the protection of the individual in the event of his capture by the enemy.]

A

Extracts from conventions adopted at the Second International Peace Conference held at The Hague, 1907

Each of these conventions stipulate—

(*a*) The provisions of the present conventions do not apply except to the contracting powers, and then only if all the belligerents are parties to the convention.

(*b*) Nonsignatory powers may adhere to the present convention.

CONVENTION RESPECTING THE LAWS AND CUSTOMS OF WAR ON LAND.

* * * * *

SECTION I.—ON BELLIGERENTS.

CHAPTER I.—*The qualifications of belligerents.*

ARTICLE I. The laws, rights, and duties of war apply not only to armies, but also to militia and volunteer corps fulfilling the following conditions:—

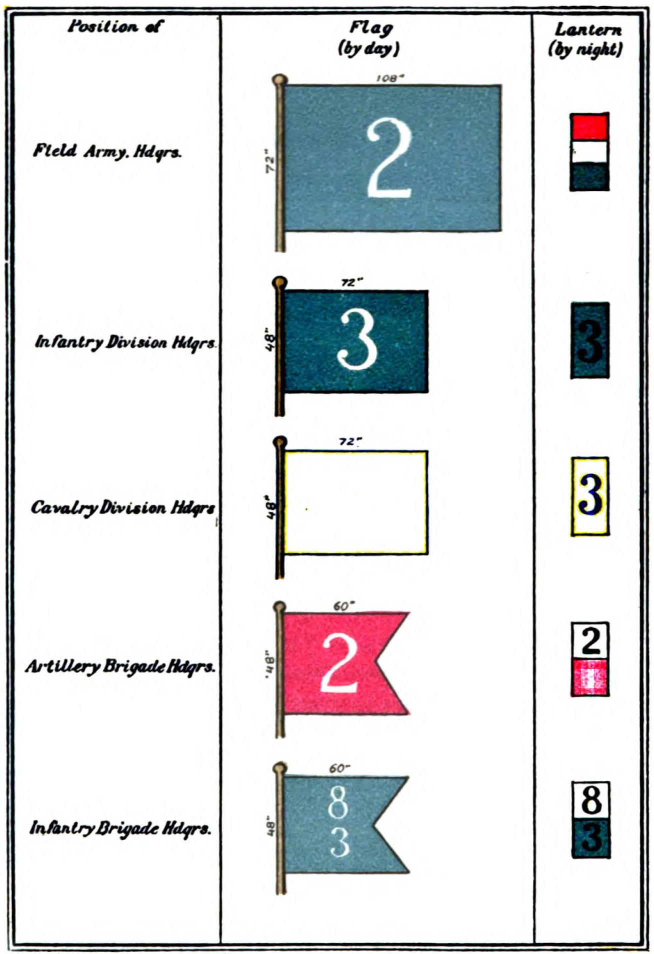
1. To be commanded by a person responsible for his subordinates;
2. To have a fixed distinctive emblem recognizable at a distance;
3. To carry arms openly; and
4. To conduct their operations in accordance with the laws and customs of war.

In countries where militia or volunteer corps constitute the army, or form part of it, they are included under the denomination "army."

ART. II. The inhabitants of a territory which has not been occupied, who, on the approach of the enemy, spontaneously take up arms to resist the invading troops without having had time to organize themselves in accordance with Article I, shall be regarded as belligerents if they carry arms openly and if they respect the laws and customs of war.

ART. III. The armed forces of the belligerent parties may consist of combatants and noncombatants. In the case of capture by the enemy, both have a right to be treated as prisoners of war.

APPENDIX 5
DISTINGUISHING FLAGS AND LANTERNS.



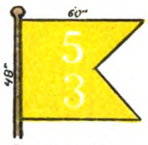
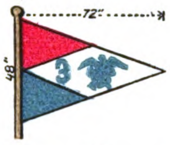
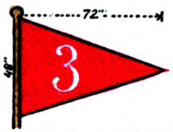
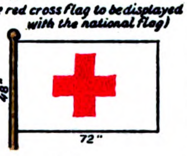
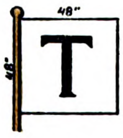
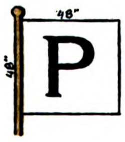
Position of	*Flag (by day)*	*Lantern (by night)*
Field Army. Hdqrs.	108" 72" 2	🟥 ⬜ 🟦
Infantry Division Hdqrs.	72" 48" 3	3
Cavalry Division Hdqrs	72" 48"	3
Artillery Brigade Hdqrs.	60" 48" 2	2 🟥
Infantry Brigade Hdqrs.	60" 48" 8 3	8 3

WAR COLLEGE DIVISION, GENERAL STAFF.

A.B. GRAHAM CO.

APPENDIX 5.

DISTINGUISHING FLAGS AND LANTERNS.

Position of	*Flag (by day)*	*Lantern (by night)*
Cavalry Brigade Hdqrs.		5 3
Supply Train and Q.M. Depots		
Ammunition train Distributing points and Depots		🟥
Sanitary Train, Regimental Aid & Dressing station, Sanitary Column, Hospital etc.	*(The red cross flag to be displayed with the national flag)* 	🟩
Telegraph station		T
Post Office		P

A.B. GRAHAM CO.
EDW. H. SMITH DELINEATOR

CHAPTER II.—*Prisoners of war.*

ART. IV Prisoners of war are in the power of the hostile Government, but not of the individuals or corps who capture them.

They must be humanely treated.

All their personal belongings, except arms, horses, and military papers, remain their property

ART. V. Prisoners of war may be interned in a town, fortress, camp, or other place, and bound not to go beyond certain fixed limits; but they can not be confined except as an indispensable measure of safety and only while the circumstances which necessitate the measure continue to exist.

ART. VI. The State may utilize the labour of prisoners of war according to their rank and aptitude, officers excepted. The tasks shall not be excessive and shall have no connection with the operations of the war.

Prisoners may be authorized to work for the public service, for private persons, or on their own account.

Work done for the State is paid at the rates in force for work of a similar kind done by soldiers of the national army, or, if there are none in force, at a rate according to the work executed.

When the work is for other branches of the public service or for private persons the conditions are settled in agreement with the military authorities.

The wages of the prisoners shall go toward improving their position, and the balance shall be paid them on their release, after deducting the cost of their maintenance.

ART. VII. The Government into whose hands prisoners of war have fallen is charged with their maintenance.

In the absence of a special agreement between the belligerents, prisoners of war shall be treated as regards board, lodging, and clothing on the same footing as the troops of the Government who captured them.

ART VIII. Prisoners of war shall be subject to the laws, regulations, and orders in force in the army of the State in whose power they are. Any act of insubordination justifies the adoption toward them of such measures of severity as may be considered necessary

Escaped prisoners who are retaken before being able to rejoin their own army or before leaving the territory occupied by the army which captured them are liable to disciplinary punishment

Prisoners who, after succeeding in escaping, are again taken prisoners, are not liable to any punishment on account of the previous flight.

ART. IX. Every prisoner of war is bound to give, if he is questioned on the subject, his true name and rank, and if he infringes this rule, he is liable to have the advantages given to prisoners of his class curtailed.

ART X. Prisoners of war may be set at liberty on parole if the laws of their country allow, and, in such cases, they are bound, on their personal honour, scrupulously to fulfill, both toward their own Government and the Government by whom they were made prisoners, the engagements they have contracted.

In such cases their own Government is bound neither to require of nor accept from them any service incompatible with the parole given.

ART. XI. A prisoner of war can not be compelled to accept his liberty on parole; similarly the hostile Government is not obliged to accede to the request of the prisoner to be set at liberty on parole.

ART. XII. Prisoners of war liberated on parole and recaptured bearing arms against the Government to whom they had pledged their honour, or against the allies of that Government, forfeit their right to be treated as prisoners of war, and can be brought before the courts.

Art. XIII. Individuals who follow an army without directly belonging to it, such as newspaper correspondents and reporters, sutlers and contractors, who fall into the enemy's hands and whom the latter thinks expedient to detain, are entitled to be treated as prisoners of war, provided they are in possession of a certificate from the military authorities of the army which they were accompanying.

Art. XIV. An inquiry office for prisoners of war is instituted on the commencement of hostilities in each of the belligerent States, and, when necessary, in neutral countries which have received belligerents in their territory. It is the function of this office to reply to all inquiries about the prisoners. It receives from the various services concerned full information respecting internments and transfers, releases on parole, exchanges, escapes, admissions into hospital, deaths, as well as other information necessary to enable it to make out and keep up to date an individual return for each prisoner of war. The office must state in this return the regimental number, name and surname, age, place of origin, rank, unit, wounds, date and place of capture, internment, wounding, and death, as well as any observations of a special character. The individual return shall be sent to the Government of the other belligerent after the conclusion of peace.

It is likewise the function of the inquiry office to receive and collect all objects of personal use, valuables, letters, etc., found on the field of battle or left by prisoners who have been released on parole, or exchanged, or who have escaped, or died in hospitals or ambulances, and to forward them to those concerned.

Art. XV. Relief societies for prisoners of war, which are properly constituted in accordance with the laws of their country and with the object of serving as the channel for charitable effort shall receive from the belligerents, for themselves and their duly accredited agents every facility for the efficient performance of their humane task within the bounds imposed by military necessities and administrative regulations. Agents of these societies may be admitted to the places of internment for the purpose of distributing relief, as also to the halting places of repatriated prisoners, if furnished with a personal permit by the military authorities, and on giving an undertaking in writing to comply with all measures of order and police which the latter may issue.

Art. XVI. Inquiry offices enjoy the privilege of free postage. Letters, money orders, and valuables, as well as parcels by post, intended for prisoners of war, or dispatched by them, shall be exempt from all postal duties in the countries of origin and destination, as well as in the countries they pass through.

Presents and relief in kind for prisoners of war shall be admitted free of all import or other duties, as well as of payments for carriage by the State railways.

Art. XVII. Officers taken prisoners shall receive the same rate of pay as officers of corresponding rank in the country where they are detained, the amount to be ultimately refunded by their own Government.

Art. XVIII. Prisoners of war shall enjoy complete liberty in the exercise of their religion, including attendance at the services of whatever church they may belong to, on the sole condition that they comply with the measures of order and police issued by the military authorities.

Art. XIX. The wills of prisoners of war are received or drawn up in the same way as for soldiers of the national army.

The same rule shall be observed regarding death certificates as well as for the burial of prisoners of war, due regard being paid to their grade and rank.

Art. XX. After the conclusion of peace, the repatriation of prisoners of war shall be carried out as quickly as possible.

Chapter III.—*The sick and wounded.*

Art. XXI. The obligations of belligerents with regard to the sick and wounded are governed by the Geneva Convention.

SECTION II.—HOSTILITIES.

CHAPTER I.—*Means of injuring the enemy, sieges, and bombardments.*

ART. XXII. The right of belligerents to adopt means of injuring the enemy is not unlimited.

ART. XXIII. In addition to the prohibitions provided by special conventions, it is especially forbidden—

(*a*) To employ poison or poisoned weapons;

(*b*) To kill or wound treacherously individuals belonging to the hostile nation or army;

(*c*) To kill or wound an enemy who, having laid down his arms, or having no longer means of defense, has surrendered at discretion;

(*d*) To declare that no quarter will be given;

(*e*) To employ arms, projectiles, or material calculated to cause unnecessary suffering;

(*f*) To make improper use of a flag of truce, of the national flag, or of the military insignia and uniform of the enemy, as well as the distinctive badges of the Geneva Convention;

(*g*) To destroy or seize the enemy's property, unless such destruction or seizure be imperatively demanded by the necessities of war;

(*h*) To declare abolished, suspended, or inadmissible in a court of law the rights and actions of the nationals of the hostile party.

A belligerent is likewise forbidden to compel the nationals of the hostile party to take part in the operations of war directed against their own country, even if they were in the belligerent's service before the commencement of the war.

ART. XXIV. Ruses of war and the employment of measures necessary for obtaining information about the enemy and the country are considered permissible.

ART. XXV. The attack or bombardment, by whatever means, of towns, villages, dwellings, or buildings which are undefended is prohibited.

ART. XXVI. The officer in command of an attacking force must, before commencing a bombardment, except in cases of assault, do all in his power to warn the authorities.

ART. XXVII. In sieges and bombardments all necessary steps must be taken to spare, as far as possible, buildings dedicated to religion, art, science, or charitable purposes, historic monuments, hospitals, and places where the sick and wounded are collected, provided that they are not being used at the time for military purposes.

It is the duty of the besieged to indicate the presence of such buildings or places by distinctive and visible signs, which shall be notified to the enemy beforehand.

ART. XXVIII. The pillage of a town or place, even when taken by assault, is prohibited.

CHAPTER II.—*Spies.*

ART. XXIX. A person can only be considered a spy when, acting clandestinely or on false pretences, he obtains or endeavours to obtain information in the zone of operations of a belligerent, with the intention of communicating it to the hostile party.

Thus, soldiers not wearing a disguise who have penetrated into the zone of operations of the hostile army, for the purpose of obtaining information, are not considered spies. Similarly, the following are not considered spies: Soldiers and civilians, carrying out their mission openly, intrusted with the delivery of despatches intended either for their own army or for the enemy's army. To this class belong likewise persons sent in balloons for the purpose of carrying despatches and, generally, of maintaining communications between the different parts of an army or a territory.

Art. XXX. A spy taken in the act shall not be punished without previous trial.

Art. XXXI. A spy who, after rejoining the army to which he belongs, is subsequently captured by the enemy, is treated as a prisoner of war, and incurs no responsibility for his previous acts of espionage.

Chapter III.—*Flags of truce.*

Art. XXXII. A person is regarded as bearing a flag of truce who has been authorized by one of the belligerents to enter into communication with the other, and who advances bearing a white flag. He has a right to inviolability, as well as the trumpeter, bugler or drummer, the flag-bearer and interpreter who may accompany him.

Art. XXXIII. The commander to whom a flag of truce is sent is not in all cases obliged to receive it.

He may take all the necessary steps to prevent the envoy taking advantage of his mission to obtain information.

In case of abuse, he has the right to detain the envoy temporarily

Art. XXXIV. The envoy loses his right of inviolability if it is proved in a clear and incontestable manner that he has taken advantage of his privileged position to provoke or commit an act of treachery.

Chapter IV.—*Capitulations.*

Art. XXXV. Capitulations agreed upon between the contracting parties must take into account the rules of military honour.

Once settled, they must be scrupulously observed by both parties.

Chapter V.—*Armistices.*

Art. XXXVI. An armistice suspends military operations by mutual agreement between the belligerent parties. If its duration is not defined, the belligerent parties may resume operations at any time, provided always that the enemy is warned within the time agreed upon, in accordance with the terms of the armistice.

Art. XXXVII. An armistice may be general or local. The first suspends the military operations of the belligerent States everywhere; the second only between certain fractions of the belligerent armies and within a fixed radius.

Art. XXXVIII. An armistice must be notified officially and in good time to the competent authorities and to the troops. Hostilities are suspended immediately after the notification, or on the date fixed.

Art. XXXIX. It rests with the contracting parties to settle, in the terms of the armistice, what communications may be held in the theater of war with the inhabitants and between the inhabitants of one belligerent State and those of the other.

Art. XL. Any serious violation of the armistice by one of the parties gives the other party the right of denouncing it, and even, in cases of urgency, of recommencing hostilities immediately.

Art. XLI. A violation of the terms of the armistice by private persons acting on their own initiative only entitles the injured party to demand the punishment of the offenders or, if necessary, compensation for the losses sustained.

SECTION III.—MILITARY AUTHORITY OVER THE TERRITORY OF THE HOSTILE STATE

Art. XLII. Territory is considered occupied when it is actually placed under the authority of the hostile army.

The occupation extends only to the territory where such authority has been established and can be exercised.

Art. XLIII. The authority of the legitimate power having in fact passed into the hands of the occupant, the latter shall take all the measures in his power to restore, and ensure, as far as possible, public order and safety, while respecting, unless absolutely prevented, the laws in force in the country.

Art. XLIV. A belligerent is forbidden to force the inhabitants of territory occupied by it to furnish information about the army of the other belligerent, or about its means of defence.

Art. XLV. It is forbidden to compel the inhabitants of occupied territory to swear allegiance to the hostile power.

Art. XLVI. Family honour and rights, the lives of persons, and private property, as well as religious convictions and practice, must be respected.

Private property can not be confiscated.

Art. XLVII. Pillage is formally forbidden.

Art. XLVIII. If, in the territory occupied, the occupant collects the taxes, dues, and tolls imposed for the benefit of the State, he shall do so, as far as is possible, in accordance with the rules of assessment and incidence in force, and shall in consequence be bound to defray the expenses of the administration of the occupied territory to the same extent as the legitimate Government was so bound.

Art. XLIX. If, in addition to the taxes mentioned in the above article, the occupant levies other money contributions in the occupied territory, this shall only be for the needs of the army or of the administration of the territory in question.

Art. L. No general penalty, pecuniary or otherwise, shall be inflicted upon the population on account of the acts of individuals for which they can not be regarded as jointly and severally responsible.

Art. LI. No contribution shall be collected except under a written order, and on the responsibility of a commander in chief.

The collection of the said contribution shall only be effected as fas as possible in accordance with the rules of assessment and incidence of the taxes in force.

For every contribution a receipt shall be given to the contributors.

Art. LII. Requisitions in kind and services shall not be demanded from municipalities or inhabitants except for the needs of the army of occupation. They shall be in proportion to the resources of the country, and of such a nature as not to involve the inhabitants in the obligation of taking part in military operations against their own country.

Such requisitions and services shall only be demanded on the authority of the commander in the locality occupied.

Contributions in kind shall as far as possible be paid for in cash; if not, a receipt shall be given and the payment of the amount due shall be made as soon as possible.

Art. LIII. An army of occupation can only take possession of cash, funds, and realizable securities which are strictly the property of the State, depots of arms. means of transport, stores and supplies, and, generally, all movable property belonging to the State which may be used for military operations.

All appliances, whether on land, at sea, or in the air, adapted for the transmission of news, or for the transport of persons or things, exclusive of cases governed by naval law, depots of arms, and, generally, all kinds of ammunition of war, may be seized, even if they belong to private individuals, but must be restored and compensation fixed when peace is made.

Art. LIV. Submarine cables connecting an occupied territory with a neutral territory shall not be seized or destroyed except in the case of absolute necessity. They must likewise be restored and compensation fixed when peace is made.

Art. LV. The occupying State shall be regarded only as administrator and usufructuary of public buildings, real estate, forests, and agricultural estates belonging to the hostile State, and situated in the occupied country. It must safeguard the capital of these properties and administer them in accordance with the rules of usufruct.

Art. LVI. The property of municipalities, that of institutions dedicated to religion, charity and education, the arts and sciences, even when State property, shall be treated as private property.

All seizure of, destruction or wilful damage done to institutions of this character, historic monuments, works of art and science, is forbidden and should be made the subject of legal proceedings.

CONVENTION RESPECTING THE RIGHTS AND DUTIES OF NEUTRAL POWERS AND PERSONS IN WAR ON LAND

* * * * *

[Translation.]

Chapter I.—*The rights and duties of neutral powers*

Article I. The territory of neutral powers is inviolable.

Art. II. Belligerents are forbidden to move troops or convoys of either munitions of war or supplies across the territory of a neutral power.

Art. III. Belligerents are likewise forbidden to:

(*a*) Erect on the territory of a neutral power a wireless-telegraphy station or other apparatus for the purpose of communicating with belligerent forces on land or sea;

(*b*) Use any installation of this kind established by them before the war on the territory of a neutral power for purely military purposes, and which has not been opened for the service of public messages.

Art. IV. Corps of combatants can not be formed nor recruiting agencies opened on the territory of a neutral power to assist the belligerents.

Art. V. A neutral power must not allow any of the acts referred to in Articles II to IV to occur on its territory.

It is not called upon to punish acts in violation of its neutrality unless the said acts have been committed on its own territory.

Art. VI. The responsibility of a neutral power is not engaged by the fact of persons crossing the frontier separately to offer their services to one of the belligerents.

Art. VII. A neutral power is not called upon to prevent the export or transport, on behalf of one or other of the belligerents, of arms, munitions of war, or, in general, of anything which can be of use to an army or a fleet.

Art. VIII. A neutral power is not called upon to forbid or restrict the use on behalf of the belligerents of telegraph or telephone cables or of wireless telegraphy apparatus belonging to it or to companies or private individuals.

Art. IX. Every measure of restriction or prohibition taken by a neutral power in regard to the matters referred to in Articles VII and VIII must be impartially applied by it to both belligerents.

A neutral power must see to the same obligation being observed by companies or private individuals owning telegraph or telephone cables or wireless telegraphy apparatus.

Art. X. The fact of a neutral power resisting, even by force, attempts to violate its neutrality can not be regarded as a hostile act.

Chapter II.—*Belligerents interned and wounded tended in neutral territory.*

Art. XI. A neutral power which receives on its territory troops belonging to the belligerent armies shall intern them, as far as possible, at a distance from the theater of war.

It may keep them in camps and even confine them in fortresses or in places set apart for this purpose.

It shall decide whether officers can be left at liberty on giving their parole not to leave the neutral territory without permission.

ART. XII. In the absence of a special convention to the contrary, the neutral power shall supply the interned with the food, clothing, and relief required by humanity.

At the conclusion of peace the expenses caused by the internment shall be made good.

ART. XIII. A neutral power which receives escaped prisoners of war shall leave them at liberty. If it allows them to remain in its territory it may assign them a place of residence.

The same rule applies to prisoners of war brought by troops taking refuge in the territory of a neutral power.

ART. XIV. A neutral power may authorize the passage into its territory of the sick and wounded belonging to the belligerent armies, on condition that the trains bringing them shall carry neither personnel nor war material. In such a case, the neutral power is bound to take whatever measures of safety and control are necessary for the purpose.

The sick or wounded brought under these conditions into neutral territory by one of the belligerents, and belonging to the hostile party, must be guarded by the neutral power so as to insure their not taking part again in the military operations. The same duty shall devolve on the neutral State with regard to wounded or sick of the other army who may be committed to its care.

ART. XV. The Geneva Convention applies to sick and wounded interned in neutral territory.

CHAPTER III.—*Neutral persons.*

ART. XVI.—The nationals of a State which is not taking part in the war are considered as neutrals.

ART. XVII.—A neutral can not avail himself of his neutrality:

(*a*) If he commits hostile acts against a belligerent;

(*b*) If he commits acts in favour of a belligerent, particularly if he voluntarily enlists in the ranks of the armed force of one of the parties.

In such a case, the neutral shall not be more severely treated by the belligerent as against whom he has abandoned his neutrality than a national of the other belligerent State could be for the same act.

ART. XVIII. The following acts shall not be considered as committed in favour of one belligerent in the sense of Article XVII, letter (*b*):

(*a*) Supplies furnished or loans made to one of the belligerents, provided that the person who furnishes the supplies or who makes the loans lives neither in the territory of the other party nor in the territory occupied by him and that the supplies do not come from these territories;

(*b*) Services rendered in matters of police or civil administration.

CHAPTER IV.—*Railway material.*

ART. XIX. Railway material coming from the territory of neutral powers, whether it be the property of the said powers or of companies or private persons, and recognizable as such, shall not be requisitioned or utilized by a belligerent except where and to the extent that it is absolutely necessary. It shall be sent back as soon as possible to the country of origin.

A neutral power may likewise, in case of necessity, retain and utilize to an equal extent material coming from the territory of the belligerent power.

Compensation shall be paid by one party or the other in proportion to the material used, and to the period of usage.

● ● ● ●

CONVENTION RELATIVE TO THE LAYING OF AUTOMATIC SUBMARINE CONTACT MINES.

* * * * *

ARTICLE I. It is forbidden:

1. To lay unanchored automatic contact mines, except when they are so constructed as to become harmless one hour at most after the person who laid them ceases to control them;

2. To lay anchored automatic contact mines which do not become harmless as soon as they have broken loose from their moorings;

3. To use torpedoes which do not become harmless when they have missed their mark.

ART. II. It is forbidden to lay automatic contact mines off the coast and ports of the enemy, with the sole object of intercepting commercial shipping.

ART. III. When anchored automatic contact mines are employed, every possible precaution must be taken for the security of peaceful shipping.

The belligerents undertake to do their utmost to render these mines harmless within a limited time, and, should they cease to be under surveillance, to notify the danger zones as soon as military exigencies permit, by a notice addressed to shipowners, which must also be communicated to the Governments through the diplomatic channel.

ART. IV. Neutral powers which lay automatic contact mines off their coasts must observe the same rules and take the same precautions as are imposed on belligerents.

The neutral power must inform shipowners, by a notice issued in advance, where automatic contact mines have been laid. This notice must be communicated at once to the Governments through the diplomatic channel.

ART. V. At the close of the war, the contracting powers undertake to do their utmost to remove the mines which they had laid, each power removing its own mines.

As regards anchored automatic contact mines laid by one of the belligerents off the coast of the other, their position must be notified to the other party by the power which laid them, and each power must proceed with the least possible delay to remove the mines in its own waters.

ART. VI. The contracting powers which do not at present own perfected mines of the pattern contemplated in the present convention, and which, consequently, could not at present carry out the rules laid down in Articles I and III, undertake to convert the *matériel* of their mines as soon as possible, so as to bring it into conformity with the foregoing requirements.

* * * * *

DECLARATION PROHIBITING THE DISCHARGE OF PROJECTILES AND EXPLOSIVES FROM BALLOONS.

* * * * *

The contracting powers agree to prohibit, for a period extending to the close of the third peace conference, the discharge of projectiles and explosives from balloons or by other new methods of a similar nature.

The present declaration is only binding on the contracting powers in case of war between two or more of them.

It shall cease to be binding from the time when, in a war between the contracting powers, one of the belligerents is joined by a noncontracting power.

* * * * *

TABLE OF RATIFICATIONS AND ADHESIONS TO SUCH OF THE CONVENTIONS AS ARE MENTIONED IN THE TEXT.

[A convention may be ratified by a signatory power or adhered to by a nonsignatory power. In the table the following nomenclature is used: R=Ratified. RR=Ratified with reservations. A=Adhered to.]

	Convention concerning the laws and customs of war on land.	Convention concerning the rights and duties of neutral powers and persons in case of war on land.	Convention relating to the laying of automatic submarine contact mines.	Declaration relative to prohibiting the throwing down of projectiles and explosives from balloons, aeroplanes, etc.
Germany	RR	R	RR	....
United States	R	R	R	R
Austria-Hungary	RR	R	R	....
Belgium	R	R	R	R
Bolivia	R	R	....	R
China	....	A	....	R
Cuba	R	R	....	....
Denmark	R	R	R	....
France	R	R	RR	....
Great Britain	R	....	RR	R
Guatemala	R	R	R	....
Haiti	R	R	R	R
Japan	R	R	R	....
Luxemburg	R	R	R	R
Mexico	R	R	R	....
Netherlands	R	R	R	R
Nicaragua	A	A	A	A
Norway	R	R	R	R
Panama	R	R	R	R
Portugal	R	R	....	R
Roumania	R	R	R	....
Russia	RR	R	....	....
Salvador	R	R	R	R
Siam	R	R	RR	R
Sweden	R	R	....	....
Switzerland	R	R	R	R

B.

INTERNATIONAL RED CROSS CONVENTION.

[Revision of the Geneva Convention.]

The International Convention for the Amelioration of the Condition of the Wounded and Sick in Armies in the Field, Geneva. 1906, is as follows:

CHAPTER I.—*The wounded and sick.*

ARTICLE 1 Officers and soldiers, and other persons officially attached to armies, shall be respected and taken care of when wounded or sick, by the belligerent in whose power they may be, without distinction of nationality.

Nevertheless, a belligerent who is compelled to abandon sick or wounded to the enemy shall, as far as military exigencies permit, leave with them a portion of his medical personnel and material to contribute to the care of them.

ART. 2. Except as regards the treatment to be provided for them in virtue of the preceding article, the wounded and sick of an army who fall into the hands of the enemy are prisoners of war, and the general provisions of international law concerning prisoners are applicable to them.

Belligerents are, however, free to arrange with one another such exceptions and mitigations with reference to sick and wounded prisoners as they may judge expedient; in particular they will be at liberty to agree—

To restore to one another the wounded left on the field after a battle;

To repatriate any wounded and sick whom they do not wish to retain as prisoners, after rendering them fit for removal or after recovery;

To hand over to a neutral State, with the latter's consent, the enemy's wounded and sick to be interned by the neutral State until the end of hostilities.

ART. 3. After each engagement the commander in possession of the field shall take measures to search for the wounded, and to insure protection against pillage and maltreatment both for the wounded and for the dead

He shall arrange that a careful examination of the bodies is made before the dead are buried or cremated.

ART. 4. As early as possible each belligerent shall send to the authorities of the country or army to which they belong the military identification marks or tokens found on the dead, and a nominal roll of the wounded or sick who have been collected by him.

The belligerents shall keep each other mutually informed of any interments and changes, as well as of admissions into hospital and deaths among the wounded and sick in their hands. They shall collect all the articles of personal use, valuables, letters, etc., which are found on the field of battle or left by the wounded or sick who have died in the medical establishments or units, in order that such objects may be transmitted to the persons interested by the authorities of their own country.

ART. 5. The competent military authority may appeal to the charitable zeal of the inhabitants to collect and take care of, under his direction, the wounded or sick of armies, granting to those who respond to the appeal special protection and certain immunities.

CHAPTER II.—*Medical units and establishments.*

ART. 6. Mobile medical units (that is to say, those which are intended to accompany armies into the field) and the fixed establishments of the medical service shall be respected and protected by the belligerents.

Art. 7. The protection to which medical units and establishments are entitled ceases if they are made use of to commit acts harmful to the enemy.

Art. 8. The following facts are not considered to be of a nature to deprive a medical unit or establishment of the protection guaranteed by article 6—

1. That the personnel of the unit or of the establishment is armed, and that it uses its arms for its own defense or for that of the sick and wounded under its charge.
2. That in default of armed orderlies the unit or establishment is guarded by a piquet or by sentinels furnished with an authority in due form.
3. That weapons and cartridges taken from the wounded and not yet handed over to the proper department are found in the unit or establishment.

Chapter III.—*Personnel.*

Art 9. The personnel engaged exclusively in the collection, transport, and treatment of the wounded and the sick, as well as in the administration of medical units and establishments, and the chaplains attached to armies, shall be respected and protected under all circumstances. If they fall into the hands of the enemy they shall not be treated as prisoners of war.

These provisions apply to the guard of medical units and establishments under the circumstances indicated in article 8 (2).

Art. 10. The personnel of voluntary aid societies, duly recognized and authorized by their Government, who may be employed in the medical units and establishment of armies, is placed on the same footing as the personnel referred to in the preceding article, provided always that the first-mentioned personnel shall be subject to military law and regulations.

Each State shall notify to the other, either in time of peace or at the commencement of, or during the course of hostilities, but in every case before actually employing them, the names of the societies which it has authorized, under its responsibility, to render assistance to the regular medical service of its armies.

Art. 11. A recognized society of a neutral country can only afford the assistance of its medical personnel and units to a belligerent with the previous consent of its own Government and the authorization of the belligerent concerned.

A belligerent who accepts such assistance is bound to notify the fact to his adversary before making any use of it.

Art. 12. The persons designated in articles 9, 10, and 11, after they have fallen into the hands of the enemy, shall continue to carry on their duties under his direction.

When their assistance is no longer indispensable, they shall be sent back to their army or to their country at such time and by such route as may be compatible with military exigencies.

They shall then take with them such effects, instruments, arms, and horses as are their private property.

Art. 13. The enemy shall secure to the persons mentioned in article 9, while in his hands, the same allowances and the same pay as are granted to the persons holding the same rank in his own army.

Chapter IV.—*Material.*

Art. 14. If mobile medical units fall into the hands of the enemy they shall retain their material, including their teams, irrespectively of the means of transport and the drivers employed.

Nevertheless, the competent military authority shall be free to use the material for the treatment of the wounded and sick. It shall be restored under the conditions laid down for the medical personnel, and so far as possible at the same time.

ART. 15. The buildings and material of fixed establishments remain subject to the laws of war, but may not be diverted from their purpose so long as they are necessary for the wounded and the sick.

Nevertheless, the commanders of troops in the field may dispose of them, in case of urgent military necessity, provided they make previous arrangements for the welfare of the wounded and sick who are found there.

ART. 16. The material of voluntary aid societies which are admitted to the privileges of the convention under the conditions laid down therein is considered private property, and, as such, to be respected under all circumstances, saving only the right of requisition recognized for belligerents in accordance with the laws and customs of war

CHAPTER V.—*Convoys of evacuation.*

ART. 17. Convoys of evacuation shall be treated like mobile medical units, subject to the following special provisions—

1. A belligerent intercepting a convoy may break it up if military exigencies demand, provided he takes charge of the sick and wounded who are in it

2. In this case, the obligation to send back the medical personnel, provided for in article 12, shall be extended to the whole of the military personnel detailed for the transport or the protection of the convoy, and furnished with an authority in due form to that effect.

The obligation to restore the medical material, provided for in article 14, shall apply to railway trains and boats used in internal navigation, which are specially arranged for evacuations, as well as to the material belonging to the medical service for fitting up ordinary vehicles, trains, and boats

Military vehicles, other than those of the medical service, may be captured with their teams.

The civilian personnel and the various means of transport obtained by requisition, including railway material and boats used for convoy, shall be subject to the general rules of international law

CHAPTER VI.—*The distinctive emblem*

ART 18. As a compliment to Switzerland, the heraldic emblem of the red cross on a white ground, formed by reversing the Federal colors, is retained as the emblem and distinctive sign of the medical service of armies.

ART. 19. With the permission of the competent military authority this emblem shall be shown on the flags and armlets (brassards), as well as on all the material belonging to the medical service.

ART. 20. The personnel protected in pursuance of articles 9 (par 1), 10, and 11 shall wear, fixed to the left arm, an armlet (brassard) with a red cross on a white ground delivered and stamped by the competent military authority, and accompanied by a certificate of identity in the case of persons who are attached to the medical service of armies, but who have not a military uniform.

ART. 21. The distinctive flag of the convention shall only be hoisted over those medical units and establishments which are entitled to be respected under the convention, and with the consent of the military authorities. It must be accompanied by the national flag of the belligerent to whom the unit or establishment belongs.

Nevertheless, medical units which have fallen into the hands of the enemy, so long as they are in that situation, shall not fly any other flag than that of the Red Cross.

ART. 22. The medical units belonging to neutral countries which may be authorized to afford their services under the conditions laid down in article 11 shall fly, along with the flag of the convention, the national flag of the belligerent to whose army they are attached.

The provisions of the second paragraph of the preceding article are applicable to them.

Art. 23. The emblem of the red cross on a white ground and the words "Red Cross" or "Geneva Cross" shall not be used, either in time of peace or in time of war, except to protect or to indicate the medical units and establishments and the personnel and material protected by the convention.

Chapter VII.—*Application and carrying out of the convention.*

Art. 24. The provisions of the present convention are only binding upon the contracting powers in the case of war between two or more of them. These provisions shall cease to be binding from the moment when one of the belligerent powers is not a party to the convention.

Art. 25. The commanders in chief of belligerent armies shall arrange the details for carrying out the preceding articles, as well as for cases not provided for, in accordance with the instructions of their respective Governments and in conformity with the general principles of the present convention.

Art. 26. The signatory Governments will take the necessary measures to instruct their troops, especially the personnel protected, in the provisions of the present convention, and to bring them to the notice of the civil population.

Chapter VIII.—*Prevention of abuses and infractions.*

Art 27. The signatory Governments, in countries the legislation of which is not at present adequate for the purpose, undertake to adopt or to propose to their legislative bodies such measures as may be necessary to prevent at all times the employment of the emblem or the name of Red Cross or Geneva Cross by private individuals or by societies other than those which are entitled to do so under the present convention, and in particular for commercial purposes as a trade-mark or trading mark.

The prohibition of the employment of the emblem or the names in question shall come into operation from the date fixed by each legislature, and at the latest five years after the present convention comes into force. From that date it shall no longer be lawful to adopt a trade-mark or trading mark contrary to this prohibition.

Art 28. The signatory Governments also undertake to adopt, or to propose to their legislative bodies, should their military law be insufficient for the purpose, the measures necessary for the repression in time of war of individual acts of pillage and maltreatment of the wounded and sick of armies, as well as for the punishment, as an unlawful employment of military insignia, or the improper use of the Red Cross flag and armlet (brassard) by officers and soldiers or private individuals not protected by the present convention.

They shall communicate to one another, through the Swiss Federal Council, the provisions relative to these measures of repression at the latest within five years from the ratification of the present convention.

General provisions.

Art 29. The present convention shall be ratified as soon as possible. The ratification shall be deposited at Berne.

When each ratification is deposited a *procès-verbal* shall be drawn up, and a copy thereof certified as correct shall be forwarded through the diplomatic channel to all the contracting powers.

Art. 30. The present convention shall come into force for each power six months after the date of the deposit of its ratification.

ART. 31. The present convention, duly ratified, shall replace the convention of the 22d August, 1864, in relations between the contracting States.

The convention of 1864 remains in force between such of the parties who signed it who may not likewise ratify the present convention.

ART. 32. The present convention may be signed until the 31st December next by the powers represented at the conference which was opened at Geneva on the 11th June, 1906, as also by the powers, not represented at that conference, which signed the convention of 1864.

Such of the aforesaid powers as shall have not signed the present convention by the 31st December, 1906, shall remain free to accede to it subsequently. They shall notify their accession by means of a written communication addressed to the Swiss Federal Council, and communicated by the latter to all the contracting powers.

Other powers may apply to accede in the same manner, but their request shall only take effect if within a period of one year from the notification of it to the Federal Council no objection to it reaches the council from any of the contracting powers.

ART. 33. Each of the contracting powers shall be at liberty to denounce the present convention. The denunciation shall not take effect until one year after the written notification of it has reached the Swiss Federal Council. The council shall immediately communicate the notification to all the other contracting parties.

The denunciation shall only affect the power which has notified it.

The ratifications of the following States have up to the present been deposited:

Great Britain.
Siam.
United States.
Russia.
Italy.
Switzerland.
Congo.
German Empire.
Mexico.
Denmark.
Brazil.
Luxemburg.
Belgium.
Spain.
Austria-Hungary.
Japan and Corea.
Netherlands.
Chile.
Servia.
Norway.
Honduras.
Portugal.
Roumania.
Sweden.
Guatemala.
Bulgaria.

The following accessions have been notified:

Nicaragua.
Venezuela,
Turkey.
Colombia.
Cuba.
Paraguay.
Costa Rica.
Salvador.

Great Britain signed under reserve of articles 23, 27 and 28. Persia under reserve of article 18.

Appendix 7.

Miscellaneous Data.

1. **Ranges.**—For convenience of reference ranges are classified as follows:

Range.	Rifle, yards.	Field artillery, yards.	Heavy artillery, yards.
Distant	Over 2,000	Over 4,500	Over 6,500.
Long	2,000 to 1,200	4,500 to 3,500	6,500 to 4,000.
Effective	1,200 to 600	3,500 to 2,500	4,000 to 2,500.
Close	Under 600	Under 2,500	Under 2,500.

The ground effectively covered by a shrapnel is elliptical in form and at the effective ranges does not exceed 200 yards in depth by 25 yards in width.

2. **Penetration of rifle bullet:**

Material.	Inches.	
	200 yards.	600 yards.
Commercial steel	0.30	0.20
1 inch broken stone, gravel	4.80	4.28
Hard coal between 1-inch boards	9.00	7.00
Brick masonry, cement[1]	2.20	1.16
Brick masonry, lime[1]	2.40	1.14
Sand, dry[2]	18.18	11.96
Concrete, Port. 1-3-5	3.00	1.86
Oak	26.46	12.46
Sand, wet	30.00	13.00
Pine	25.72	13.00
Earth, loam	30.00	16.12
Greasy clay	60.00	32.00

[1] For single shot.

[2] In sacks, about one-half these figures.

3. **Effect of artillery fire:**

Up to 3,000 yards, the 3-inch field gun, using high explosive shell, is effective against ordinary types of overhead cover for field trenches, brick buildings, and stone walls 2 feet thick. It is ineffective against earthern parapets.

The heavier types of field guns and howitzers are effective against all kinds of field works, and protection against this kind of fire must be secured by concealment.

4. Communicating radius of Signal Corps equipment:

Field battalion signal troops (infantry division)—
- 1 wire company:
  - 4 wire sets (reel carts) 20 miles (total).
- 1 radio company—
  - 2 radio sets (wheel) 200 miles radius.
  - 2 radio sets (pack) 30 miles radius.

Field battalion signal troops (cavalry division)—
- 1 headquarter company—
  - 2 radio sets (wheel) 200 miles radius.
  - 2 wire sets (reel carts) 10 miles (total).
- 1 radio company—
  - 4 radio sets (pack) 30 miles radius.

5. Length of bridges:

Ponton battalion—
- 1 company (light equippage) 3 bridge division, each 184 feet, total 552 feet.
- 1 company (heavy equipage) 6 bridge division, each 225 feet, total 1,350 feet.

6. Capacity of field hospital company and evacuation hospital:

Field hospital company, number of beds in equipment,[1] 216.

Evacuation hospital, number of beds in equipment,[1] 324.

7. Average net cargoes of vehicles, pack mules, and transportation units:

	Pounds.
4-mule army wagon (except that loads on combat trains are fixed at 2,465 pounds)	2,765
Pack mules	250
Auto trucks	3,000
Wagon company	75,000
Auto-truck company	80,000
Pack train company (no grain carried)	12,000

8. Average results of one man hour labor:

Excavation—

In easy soil—

	Cubic feet.[2]
First hour	30
Second hour	25
Third hour	15
Thereafter continuous work	10

In hard soil, about half the above.

In loose earth, 60 cubic feet.

Filling sand bags, 20 bags (0.5 cubic foot each).

Revetment construction (material and tools on hand):

Rough brush wood or plank	square feet per man hour	40
Bushwood hurdles, rough—		
Making	do	15
Placing	do	30
Sand bags—		
Filling	do	10
Placing	do	20
Sod—		
Obtaining sod for	do	7
Placing	do	10

---

[1] By utilizing local facilities a greater number of patients can be taken care of by personnel.

[2] By working in two reliefs above figures can be increased by one-third.

8. Average results of one man hour labor—Continued.

		Cubic feet.
Obstacle construction (material and tools on hand)—		
Abattis, wired (1 strong row)	linear feet..	1.5
Wire entanglement—		
High	square feet..	27
Low	do......	90
Clearing [1]—		
Thickets up to 1.5 inches diameter	square yards..	25
Light clearings of soft woods, trees to 12 inches in diameter	square yards..	25
Medium clearing	do....	15

9. Water—Approximate daily requirements:

1 gallon per man on march.
5 gallons per man in camp.
6 to 10 gallons per animal on march and camp.

(The above figures apply to water taken from streams, where animals are watered at the streams, and cooking water carried. In estimating the daily supply for permanent or semipermanent camps, where water is piped to kitchens, bath houses, etc., the requirements will be 25 to 30 gallons per man and 10 to 15 gallons per animal, depending on climatic conditions.)

Estimating quantity of water in stream:

$B \times D \times V \times 10{,}800 =$ gallons in 24 hours. B = average width, D = average depth, V = average velocity (all in feet).

10. Practicability of slopes.—Slopes from 0° to 5° are practicable for maneuvering all arms, singly or combined.

On slopes from 5° to 10° all arms can still be maneuvered, but with increasing difficulty.

On slopes from 10° to 15° all arms can be moved up or down.

Slopes from 15° to 30° are practicable for small detachments only.

On slopes from 30° to 45' foot troops can move with difficulty.

War material can be dragged up any slope.

Slope fractions.[2]	Degrees.	Operations.
1/50	1	Maximum for railroads.
1/20	3	Maximum for first-class roads.
1/12	5	Practicable for all arms. Somewhat difficult for cavalry to charge descending.
1/10	6	Maximum for cavalry charge in mass ascending. Infantry in close order descends with some difficulty.
1/8	7	Cavalry can descend at a trot.
1/7	8	Not practicable for heavily loaded vehicles.
1/6	9½	Field artillery can no longer maneuver.
1/4	14-15	Maximum up to which all arms can move.
1/3	18½	Light vehicles can ascend.
1/2	26	Individuals and mules can ascend or descend.
1/1	45	Foot troops can ascend or descend aided by hands.

---

[1] Removal of cuttings in both cases involves an equal amount of labor.

[2] Natural tangent of angle between slope and horizontal; read 1 on 50, etc.

11. Fords, practicable depth:

3–3.5 feet deep for infantry.
4–4.5 feet deep for cavalry.
3 feet deep for artilley.
2.3 feet deep for wagons.
} Depending on current and nature of bottom.

12. Stream flow:

Velocity in miles=0.7 of velocity in feet per second.

13. Strength of ice:

3 inches thick will support small group of men.
4½ to 7 inches thick will support cavalry and light guns.
8 to 12 inches thick will support heavy guns and wagons.

14. Estimating transport capacity of ships:

Allow 3 to 4 gross tons per man and 8 to 10 per animal for ships of more than 5,000 tons, and 4 to 5 per man and 10 to 12 per animal for smaller ship. This allowance includes rations, water, forage, etc., for the voyage and a margin for reserve supplies. The tonnage allowance for animals is sufficient to provide for vehicles, it being assumed that no vehicle will be separated from its draft animals, and that the integrity of units is preserved as far as possible. The gross tonnage of a ship is her total internal space capacity, which is completely closed in and protected from sea and weather, measured in register tons. A register ton is 100 cubic feet.

A ship's ton on which basis freight is computed is 40 cubic feet.

15. Time by compass bearing (approximate):

Take true azimuth (or bearing) of sun (T. A.); (T. A.–180°) 4/60=hours before or after 12 o'clock.

16. Use of watch as compass (approximate):

Direct hour hand toward sun. A bearing half way between hour hand and the 2 oClock mark on the watch is the true south.

APPENDIX 8

Signals and Codes

1. General Service Code. (International Morse Code.)

Used for visual (except semaphore) and sound signaling, radio telegraphy, on cables using siphon recorders, in communication with the Navy, and in intra-Field Artillery buzzer communication.

A	-—	J	-———	S	---
B	—---	K	—-—	T	—
C	—-—-	L	-—--	U	--—
D	—--	M	——	V	---—
E	-	N	—-	W	-——
F	--—-	O	———	X	—--—
G	——-	P	-——-	Y	—-——
H	----	Q	——-—	Z	——--
I	--	R	-—-		

NUMERALS.

1	-————	5	-----	8	———--
2	--———	6	—----	9	————-
3	---——	7	——---	0	—————
4	----—				

PUNCTUATION.

Period	-- -- --
Comma	-—-—-—
Interrogation	--——--
Hyphen or dash	—----—
Parentheses (before and after the words)	—-——-—
Quotation mark (beginning and ending)	-—--—-
Exclamation	——--——
Apostrophe	-————-
Semicolon	—-—-—-
Colon	———---
Bar indicating fraction	—--—-
Underline (before and after the word or words it is wished to underline)	--——-—
Double dash (between preamble and address, between address and body of message, between body of message and signature, and immediately before a fraction)	—---—
Cross	-—-—-

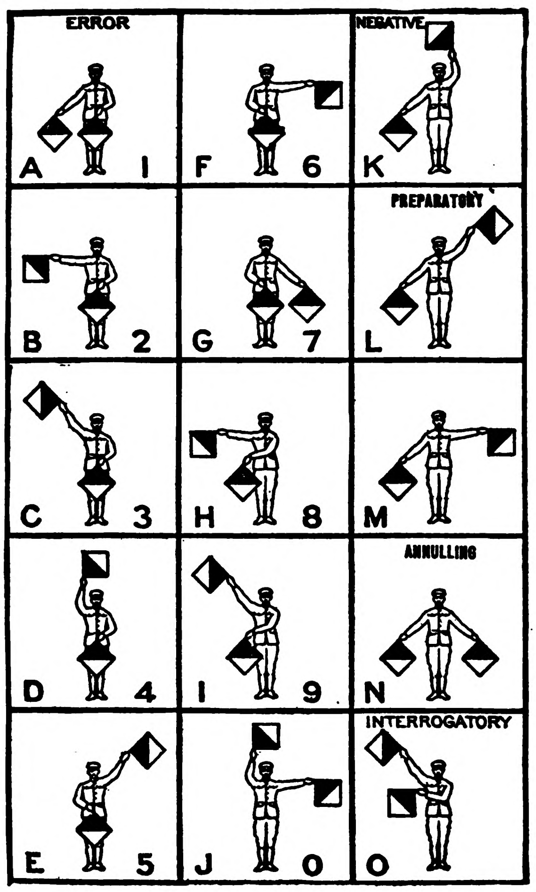
Note.—Numerals and punctuations must be spelled out in the ardois, as they require more than four elements, which is the limit of the ardois keyboard.

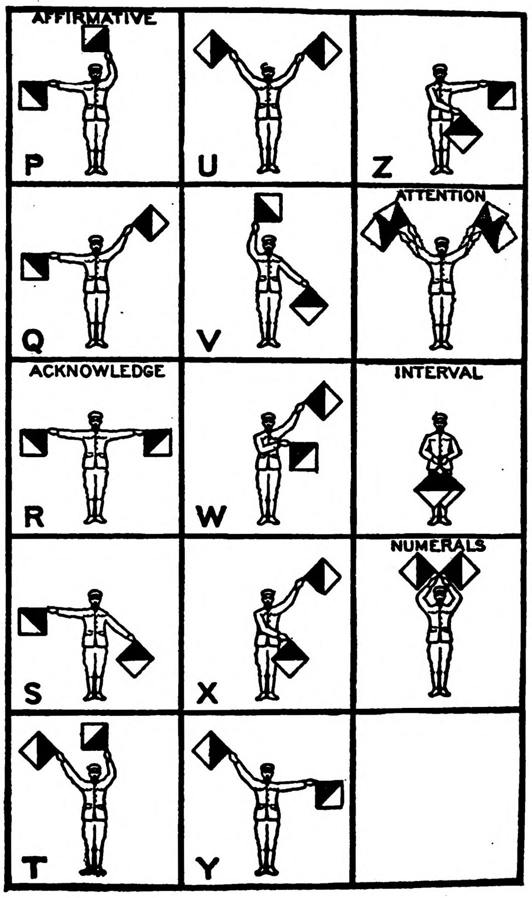
2. Conventional Flag Signals. (Printed on page 218.)

3. The Two-Arm Semaphore Code (pages 210, 211).

APPENDIX 8.

THE TWO-ARM SEMAPHORE CODE.


ERROR
A 1
F 6
NEGATIVE
K
PREPARATORY
B 2
G 7
L
C 3
H 8
M
D 4
I 9
ANNULLING
N
E 5
J 0
INTERROGATORY
O


AFFIRMATIVE
P
U
Z
Q
V
ATTENTION
ACKNOWLEDGE
R
W
INTERVAL
S
X
NUMERALS
T
Y

WIGWAG.

Signaling by flag, torch, hand lantern, or beam of searchlight (without shutter).[1]

1. There is one position and there are three motions. The position is with flag or other appliance held vertically, the signalman facing directly toward the station with which it is desired to communicate. The first motion (the dot) is to the right of the sender, and will embrace an arc of 90°, starting with the vertical and returning to it, and will be made in a plane at right angles to the line connecting the two stations. The second motion (the dash) is a similar motion to the left of the sender. The third motion (front) is downward directly in front of the sender and instantly returned upward to the first position. This is used to indicate a pause or conclusion.

2. The beam of the searchlight, though ordinarily used with the shutter like the heliograph, may be used for long-distance signaling, when no shutter is suitable or available, in a similar manner to the flag or torch, the first position being a vertical one. A movement of the beam 90° to the right of the sender indicates a dot, a similar movement to the left indicates a dash; the beam is lowered vertically for front.

3. To use the torch or hand lantern, a footlight must be employed as a point of reference to the motion. The lantern is more conveniently swung out upward to the right of the footlight for a dot, to the left for a dash, and raised vertically for front.

4. To call a station, make the call letter until acknowledged, at intervals giving the call or signal of the calling station. If the call letter of a station is unknown, wave flag until acknowledged. In using the searchlight without shutter throw the beam in a vertical position and move it through an arc of 180° in a plane at right angles to the line connecting the two stations until acknowledged. To acknowledge a call, signal "Acknowledgement (or) I understand (- - - - front). followed by the call letter of the acknowledging station

Signaling with heliograph, flash lantern, and searchlight (with shutter).[1]

1. The first position is to turn a steady flash on the receiving station. The signals are made by short and long flashes. Use a short flash for dot and a long steady flash for dash. The elements of a letter should be slightly longer than in sound signals.

2. To call a station, make the call letter until acknowledged, at intervals giving the call or signal of the calling station.

3. If the call letter of a station be unknown, signal a series of dots rapidly made until acknowledged. Each station will then turn on a steady flash and adjust When the adjustment is satisfactory to the called station, it will cut off its flash, and the calling station will proceed with its message.

4. If the receiver sees that the sender's mirror needs adjustment, he will turn on a steady flash until answered by a steady flash. When the adjustment is satisfactory, the receiver will cut off his flash and the sender will resume his message.

5. To break the sending station for other purposes, turn on a steady flash.

---

[1] Extracts from Signal Book, United States Army.

Sound Signals.[1]

1. Sound signals made by the whistle, foghorn, bugle, trumpet, and drum may well be used in a fog, mist, falling snow, or at night. They may be used with the dot and dash code.

2. In applying the code to whistle, foghorn, bugle, or trumpet, one short blast indicates a dot and one long blast a dash. With the drum, one tap indicates a dot and two taps in rapid succession a dash. Although these signals can be used with a dot and dash code, they should be so used in connection with a preconcerted or conventional code.

Morse Code. (American Morse Code.)[1]

Used only by the army on telegraph lines, on short cables, and on field lines, and on all commercial lines in the United States.

A	.-	O	. .
B	-...	P	.....
C	.. .	Q	..-.
D	-..	R	. ..
E	.	S	...
F	.-.	T	-
G	--.	U	..-
H	....	V	...-
I	..	W	.--
J	-.-.	X	.-..
K	-.-	Y	.. ..
L	—	Z	... .
M	--	&	. ...
N	-.		

NUMERALS.

1	.--.	6	....
2	..-..	7	--..
3	...-.	8	-....
4	....-	9	-..-
5	---	0	—

PUNCTUATION.

Perk	..--..
Comma	.-.-
Interrogation	-..-.

---

[1] Extracts from Signal Book, United States Army

Appendix 9.

List of Abbreviations.

Tactical organizations:	
3d Div	Third Infantry Division.
1st Cav. Div	First Cavalry Division.
1st Sep. Brig	First Separate Brigade.
8th Brig. 3d Div	Eighth Infantry Brigade of Third Infantry Division.
2d Brig. 1st Cav. Div.	Second Cavalry Brigade of First Cavalry Division.
4th Brig. F. A	Fourth Brigade of Field Artillery
5th Hv. A	Fifth Regiment of Heavy Artillery.
4th M. A	Fourth Regiment of Mountain Artillery.
1st Pon. Bn	First Ponton Battalion.
1st Aero Sq	First Aero Squadron.
3d Inf	Third Regiment of Infantry.
2d Cav	Second Regiment of Cavalry
3d L. A	Third Regiment of Light Artillery.
6th H. A	Sixth Regiment of Horse Artillery.
1st Bn. Engrs	First Pioneer Battalion of Engineers.
1st Bn. mtd. Engrs	First Pioneer Battalion of Engineers, Mounted.
1st Bn. Sig	First Field Battalion Signal Troops.
1st Bn. Sig. cav	First Field Battalion Signal Troops, Cavalry.
1st Tel. Bn	First Telegraph Battalion.
Trains:	
C. Tn	Combat train.
F. Tn	Field train.
B. Sec. F. Tn	Baggage section field train.
R. Sec. F. Tn	Ration section field train.
Am. Tn	Ammunition train.
Sp. Tn	Supply train.
Sn. Tn	Sanitary train.
1st Amb. Co	First Ambulance Company.
2d F. Hosp. Co	Second Field Hospital Company.
1st Med. Res. Co	First Medical Reserve Company.
Engr. Tn	Engineer train.

Columns (1 of c):

Am. Col	Ammunition column.
Sp. Col	Supply column.
Sn. Col	Sanitary column.
Engr. Col	Engineer column.

FRACTIONAL ORGANIZATION.

Infantry:
- 3d Div. (less cav. and 1 bn. F. A.)
- 2d Brig. (less 1 regt.)
- 1st Inf. (less 6 cos. and M. G. Co.)
- 1 bn. 6th Inf.
- 1st Bn. 6th Inf. (less 1 co.)
- Co. A 1st Inf. (less 1 plat.)

Cavalry:
- 1st Cav. Div. (less 1 brig.)
- 2d Brig. (less 1 regt.)
- 3d Cav. (less 1 sq. and M. G. detch.)
- 1 Sq. 4th Cav.
- 1st Sq. 4th Cav. (less 1 tr.)
- Tr. C 4th Cav. (less 2 plats.)

Artillery:
- 4th Brig. F. A. (less 1 bn.)
- 3d L. A. (less 1 bn.)
- 1 bn. 1st L. A. (less 1 btry.)
- 1st L. A. (less 2 btries.)
- Btry. A 6th H. A.
- 5th Hv. A. (less 1 bn 6″ How.)
- 1 Bn. 4.7″ How., 5th Hv. A.
- 1 Btry. 4.7″ gun, 5th Hv. A.

Engineers:
- 1st Bn. Engrs. (less 1 co.)
- Co. A Engrs. (less 1 sec.)
- 2 Secs. Engrs.
- 1st Pon. Bn. (less 1 co. heavy equip.)
- 1 pon. co. light equip. (less 2 bridge div.)

Signal:
- 1st Bn. Sig. (less 1 wire plat.)
- 1 rad. Co. Sig.
- 1 wire Co. Sig.
- 1 rad. sec. pack, Sig.
- 1 rad. plat. wagon, Sig.

Signal—Continued.
    1 wire sec. Sig.
    1 wire plat. Sig.

Miscellaneous:

Adj	adjutant.
Adm. Sec. G. S	administrative section, general staff.
A. D. of Ry	assistant director of railways.
Am	ammunition.
Adv. Gd	advance guard.
Adv. Sec. L. of C	advance section, line of communications.
Asst. C. of S	assistant chief of staff.
Base Sec. L. of C	base section, line of communications.
Brig. Gen	brigadier general.
Capt	captain.
C. G	commanding general.
C. G. L. of C	commanding general, line of communications.
C. O	commanding officer.
Col	colonel.
C. of S	chief of staff.
Comdg	commanding.
Comb. Sec. G. S	combat section, general staff.
Detch	detachment.
D. of Ry	director of railways.
E. O	engineer officer.
F. O	field order.
F. S. R	field service regulations.
Gd	guard.
Gen	general.
G. O	general order.
Insp	inspector.
Int. Sec. G. S	intelligence section, general staff.
Inter. Sec. L. of C	intermediate section, line of communications.
J. A	judge advocate.
L. of C	line of communications.
Lt	lieutenant.
Lt. Col	lieutenant colonel.
Lt. Gen	lieutenant general.
Maj	major.
Maj. Gen	major general.

Miscellaneous—Continued.

M. P.	military police.
N. C. O.	noncommissioned officer.
O. O.	ordnance officer.
Q. M.	quartermaster.
S. A. Am.	small arms ammunition.
Sig. O.	signal officer
S. O.	special order.
Surg.	surgeon.

(*Appendix* 8, *continued from page* 209.)

2. *Conventional flag signals.*

For communication between the firing line and the reserve or commander in rear, the subjoined signals (Signal Corps codes) are prescribed and should be memorized. In transmission, their concealment from the enemy's view should be insured. In the absence of signal flags, the headdress or other substitute may be used.

Letter of alphabet.	If signaled from the rear to the firing line.	If signaled from the firing line to the rear.
A M	Ammunition going forward.	Ammunition required.
C C C	Charge (mandatory at all times).	Am about to charge if no instructions to the contrary.
C F	Cease firing.	Cease firing.
D T	Double time or "rush."	Double time or "rush" or hurry.
F	Commence firing.	Commence firing.
F L	Artillery fire is causing us losses.	Artillery fire is causing us losses.
G	Move forward	Preparing to move forward.
H H H	Halt.	Halt.
K	Negative.	Negative.
L T	Left.	Left.
O (Ardois and semaphore only.)	What is the (R. N. etc.)? Interrogatory.	What is the (R. N. etc.)? Interrogatory.
— — — — — — (All methods but ardois and semaphore.)	What is the (R. N. etc.)? Interrogatory.	What is the (R. N. etc.)? Interrogatory.
P	Affirmative.	Affirmative.
R	Acknowledgment.	Acknowledgment.
R N	Range.	Range.
R T	Right.	Right.
S S S	Support going forward.	Support needed.
T	Target.	Target.

QUICK REFERENCE INDEX.

PARTS.

Page.
1. Organization 9
2. Operations 12
3. Administration 111
   Appendices 171

GENERAL.

ARTICLES AND APPENDICES.

Abbreviations, list of 214
Administration, general 111
Censorship 165
Combat 67
Conventions and conferences, international 190
Flags and lanterns 189
Information 12
Intrenchments, types of 180
Maps and sketches 188
Marches and convoys 47
Military police 163
Miscellaneous data 205
Orders 40
    Forms of 182
Organization 9
Post offices 170
Security 24
Semipermanent camps 174
Service of the interior 112
Service of the theater of operations 117
Shelter 103
Signals and codes 209
Transportation by rail 156
War strength, road space and camp dimensions 172
Zone of the advance 120
Zone of the line of communications 145

DETAILED.

SUBJECT MATTER.

Abbreviations, list of 214
Administration, general 111
Advance guards 14, 16, 24, 26, 29, 30
Air craft 19
Ammunition service 132
Artillery fire, effect of 205
Bridges, length of ponton 206

Page.
- Camps:
  - Data and dimensions 172
  - On the march 55, 106, 172
  - Semipermanent 174
- Cargoes of vehicles, pack mules, etc 206
- Censorship 165
- Coast defense 10
- Codes and signals 209
- Combat:
  - Bivouacs 101
  - Combined arms 68
  - Defensive—
    - Assembly positions 95
    - Cavalry 91
    - Counter attack 90
    - Covering positions 95
    - Defensive positions 91
    - Delaying actions 98
    - Passive defense 89
    - Positions in readiness 93
    - Retreat 96
    - Seeking favorable decision 89
    - Withdrawal 94
  - Deployment 78
  - Fire superiority 70
  - Frontage 71
  - Intrenchments 72
  - Leader, post of 72
  - Machine guns 72
  - Measures after battle 102, 142
  - Night—
    - Advance 101
    - Defensive 100
    - Offensive 100
  - Offensive—
    - Assault 85
    - Attack 82
    - Attack, enveloping 83
    - Attack, holding 84
    - Pursuit 87
    - Turning movements 84
  - Orders 75
  - Plan 75
  - Principles 67
  - Rencontre 80
  - Reserves 73
  - Surprise 80
- Conference, Hague 190
- Convention, Red Cross 200
- Correspondents, newspaper 166
- Engineer train 123, 124
- Flags and lanterns, distinguishing 189
- Flank guards 12, 24, 31
- Fords, practicable depths 207

Page.
Hospitals, capacity of 206
Ice, strength of 207
Information:
  General principles 12
  Transmission of 12, 22
Intrenchments:
  In combat 72
  Types of 180
Labor, results by one man 206
Machine guns in combat 72
Maps and sketches 188
Marches and convoys:
  Conduct of 47
  Conducting prisoners 63
  Convoys 59
  Convoys by water 63
  Regulations for—
    In campaign 56
    In peace 55
Messages, reports, maps, and diaries 20
Military police:
  Commander of trains 163
  Commanders, defense districts, line of communications 163
  Provost marshal, functions of 163
Newspaper correspondents 165
Orders: 25, 37, 140
  Composition of 42
  Field 40
  For combat 142
  Forms of 44, 182
  General 41
  General principles of 40
  Letters of instruction 40
  "Orders" 41
  Special 41
  Verbal 41
Organization:
  Army 10
  Brigade 10
  Brigade, separate 10
  Coast Artillery 10
  Coast defense 10
  Division 10
  Field Army 10
  Field Army troops 9
  Militia, organized land 9
  Mobile Army 11
  Over-sea departments 9
  Regular Army 11
  Tables of 9
  Volunteers 14, 24, 33
Outposts and outguards 11, 116
Over-sea departments .....

Page.

- **Patrols, reconnoitering** 17
- **Penetration of rifle bullet** 205
- **Post offices** 170
- **Ranges** 206
- **Rear guards** 31, 32
- **Reconnaissance:**
  - By aero squadron 13
  - By Cavalry 13
  - By divisional cavalry 14
  - By Infantry 15
  - By Independent Cavalry 14
  - During combat 16
  - Preceding combat 15
- **Retreating force, security for** 30
- **Road spaces and dimensions of camps** 172
- **Sanitary service, zone of the advance** 137
- **Security:**
  - Advance guard 26, 29, 30
  - Flank guard 31
  - General principles 24
  - Outposts and outguards 33
  - Rear guards 31, 32
  - Retreating force 30
- **Service of defense.** (*See* Zone of advance.)
- **Service of the interior:**
  - Bureau chief 112
  - Camp—
    - Concentration 113
    - Mobilization 113
  - Department commander 112
  - General regulations 112
  - Over-sea departments 116
  - Ports of embarkation 114
- **Service of military railways.** (*See* Zone of advance.)
- **Service of the theater of operations:**
  - Commander, line of communications 119
  - General regulations 117
  - General Staff—
    - Administrative section 118
    - Combat section 118
    - Intelligence section 118
  - Headquarters and staff 117
  - Technical and administrative staff 118
- **Shelter:**
  - Camps on the march 55, 106, 172
  - Care of troops 108
  - During battle 108
  - During sieges 108
  - General principles of 103
  - In the theater of operations 105
  - In the zone of the interior 104
- **Ships, transport capacity** 208
- **Signal equipment, radius of** 206

Page.

- Signals and codes 209
- Slopes, practicability of 207
- Stream flow 207
- Supply, sanitary, and telegraph service, line of communications 148
- Supply service, zone of the advance 124
- Time by compass 208
- Trains:
  - Ammunition 123, 134
  - Combat 122
  - Engineer 123, 143
  - Field 122
  - Field baggage section 122
  - Field ration section 122
  - Sanitary 123, 140
  - Supply 123, 129
- Transportation:
  - Columns—
    - Ammunition 123
    - Engineer 123
    - Sanitary 123
    - Supply 123
  - Commander of trains 124
  - Rail—
    - Commercial 156
    - Military 160
  - Trains 122, 123
- War strength, round numbers 172
- Watch as compass 208
- Water consumption 207
- Zone of the advance:
  - Ammunition service—
    - A function of the Field Artillery 132
    - Commander, ammunition train 134
    - Distributing station 134
    - Refilling point 134
    - Rendezvous point 134
    - Supply by column 134
  - Engineer train 143
  - General regulations 120
  - Sanitary service—
    - Ambulance companies 139
    - Dressing stations 138
    - Evacuating points 139
    - Field-hospital companies 139
    - General functions 137
    - In camp 140
    - In combat 141
    - In retreat 143
    - On the march 140
    - Red Cross Association 143
    - Regimental aid station 138
    - Sanitation 137
    - Stations for slightly wounded 139

Zone of the advance—Continued.
  Supply service— Page.
    Disposition of rations 128
    Operation 130
    Point—
      Distributing 126
      Refilling 124
      Rendezvous 126
    Ration 127
    Requisitions 127
Zone of the line of communications:
  Channels of correspondence 154
  General regulations 145
  Service of—
    Defense, districts and commanders 146
    Military railways—
      Director of railways 152
      Military controlling staff 152
      Railway staff officers 152
      Staff of civilian assistants 154
  Supply, sanitary, and telegraph service—
    Advance section—
      Advance groups 150
      Assistant Chief of Staff 150
    Base section—
      Assistant Chief of Staff 150
      Base groups 150
    Intermediate section 148
    Maximum and minimum supply and requisitions 148

ADDITIONAL COPIES
OF THIS PUBLICATION MAY BE PROCURED FROM

HARDING
UNIFORM AND REGALIA CO.
22 SCHOOL ST., BOSTON.

FIELD SERVICE REGULATIONS.

CHANGES }
No. 5. }

WAR DEPARTMENT,
WASHINGTON, *December 20, 1916.*

The Field Service Regulations (corrected to July 1, 1914) are changed as follows:

In Appendix 5, "Distinguishing Flags and Lanterns," omit the markings in the columns headed "Lantern (by night)" and substitute the signs indicated herein.

(*C. F. S. R., No. 5, Dec. 20, 1916.*)
[2175687 B—A. G. O.]

BY ORDER OF THE SECRETARY OF WAR.

H. L. SCOTT,
Major General, Chief of Staff.

OFFICIAL:
H. P. McCAIN,
The Adjutant General.

71645°—16

WASHINGTON : GOVERNMENT PRINTING OFFICE : 1917